Operating Instructions

COMPACT disc DIGITAL AUDIO

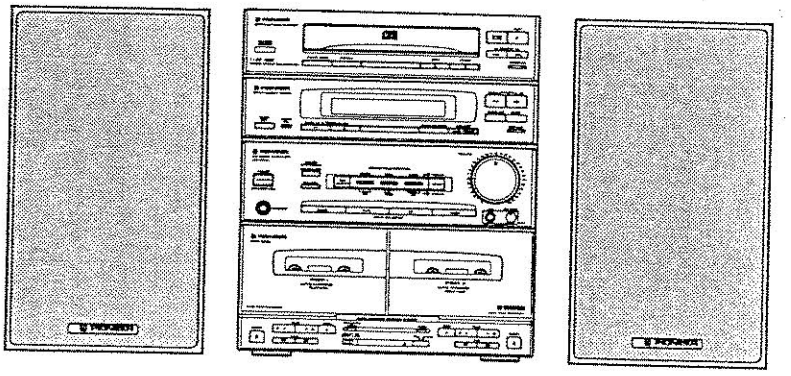
STEREO CD CASSETTE DECK RECEIVER

XR-P310

SPEAKER SYSTEM

S-P310D

S-P310A



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure place. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

PIONEER®

The Art of Entertainment

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The operating instructions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC – NATIONAL ELECTRIC CODE

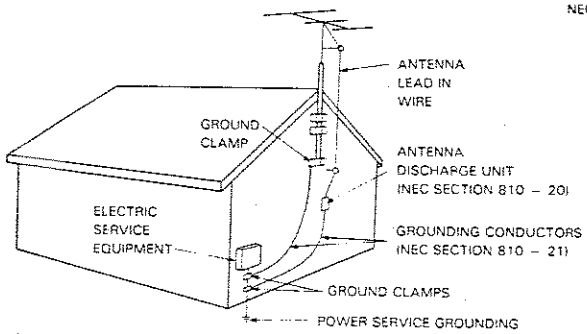

ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810 – 20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810 – 21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

FIG. A

[FOR U.S. MODEL]
CAUTION

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

POWER-CORD CAUTION

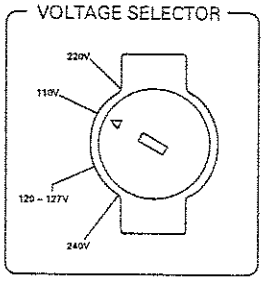
Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

LINE VOLTAGE SELECTOR SWITCH

Only multi-voltage models are provided with this switch. U.S., Canadian, U.K., Australian and European models are not provided with this switch. Mains voltages in Saudi Arabia are 127V and 220V only. Never use this model at the 110V setting in Saudi Arabia.

Before your model is shipped from the factory, this switch is set to the power requirements of the destination; nevertheless, you should check that it is set properly before plugging the power cord into the wall outlet.

1. Disconnect the power cord.
2. Use a medium-size screwdriver.
3. Insert the screwdriver into the groove on the voltage selectors and adjust so that the tip of the arrow points to the voltage value of your area.



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CAUTIONS REGARDING HANDLING

Location

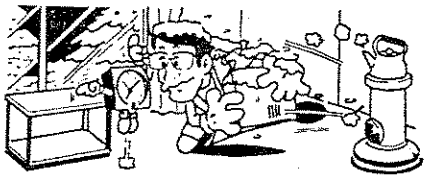
Install the unit in a well-ventilated location where it will not be exposed to high temperature or humidity.
Do not install the unit in a location which is exposed to direct rays of the sun, or near stoves or radiators. Excessive heat can adversely affect the cabinet and internal components. Installation of the unit in a damp or dusty environment may also result in malfunction or accident. (Avoid installation near cookers, etc., where the unit may be exposed to smoke from oil, steam or heat.)

Precautions regarding installation

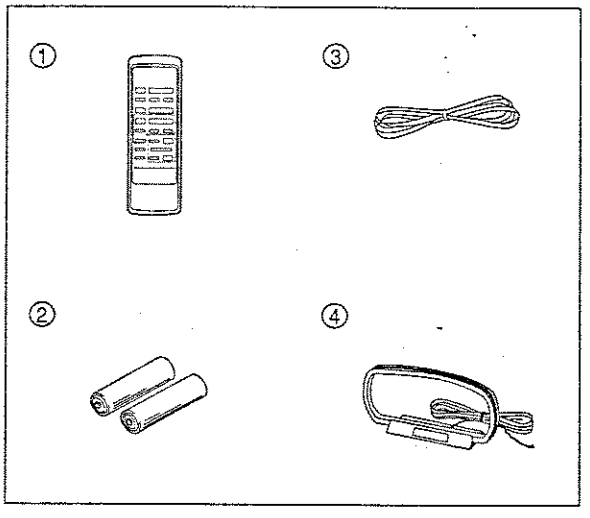
- Placing and using the unit for long periods on heat-generating sources will affect performance. Avoid placing the unit on heat-generating sources.
- Install the unit as far away as possible from your TV. Installation in close proximity to such equipment may cause noise or degradation of the picture.
- Such noise may be particularly noticeable when an indoor antenna is used. In such cases, make use of an outdoor antenna, or turn off the power to the unit.
- Please place this unit on a level surface.

Condensation

When this unit is brought into a warm room from previously cold surroundings or when the room temperature rises sharply, condensation may form inside, and the unit may not be able to attain its full performance. If this occurs, allow the unit to stand for about an hour or raise the room temperature gradually.

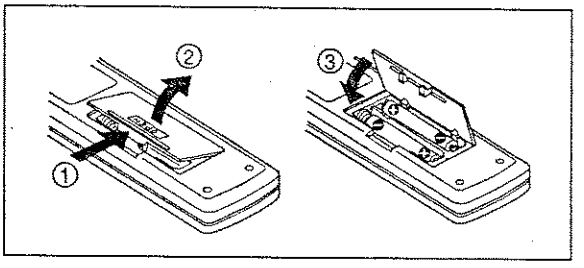


CONFIRM SUPPLIED ACCESSORIES



① Remote control unit X 1
② AAA/R03 dry cell batteries X 2
③ FM antenna X 1
④ AM loop antenna X 1

PUT BATTERIES INTO REMOTE CONTROL UNIT

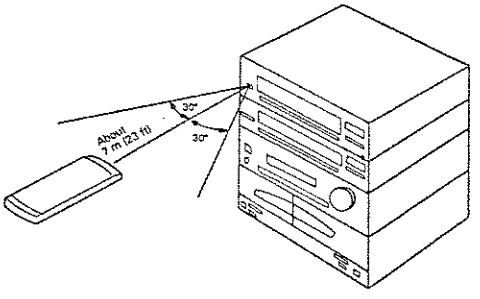


Open the battery compartment cover on the back of the remote control unit.
Insert size "AAA" (IEC R03) dry cell batteries into the battery compartment in accordance with the indications (⊕ , ⊖) inside the compartment.
Close the cover of the battery case.

Incorrect use of batteries may cause leakage or rupture.
Always be sure to follow these guidelines:
A. Always insert batteries into the battery compartment correctly matching the positive ⊕ and negative ⊖ polarities, as shown by the display inside the compartment.
B. Never mix new and used batteries.
C. Batteries of the same size may have different voltages, depending on brand. Do not mix different brands of batteries.

REMOTE CONTROL OPERATIONS

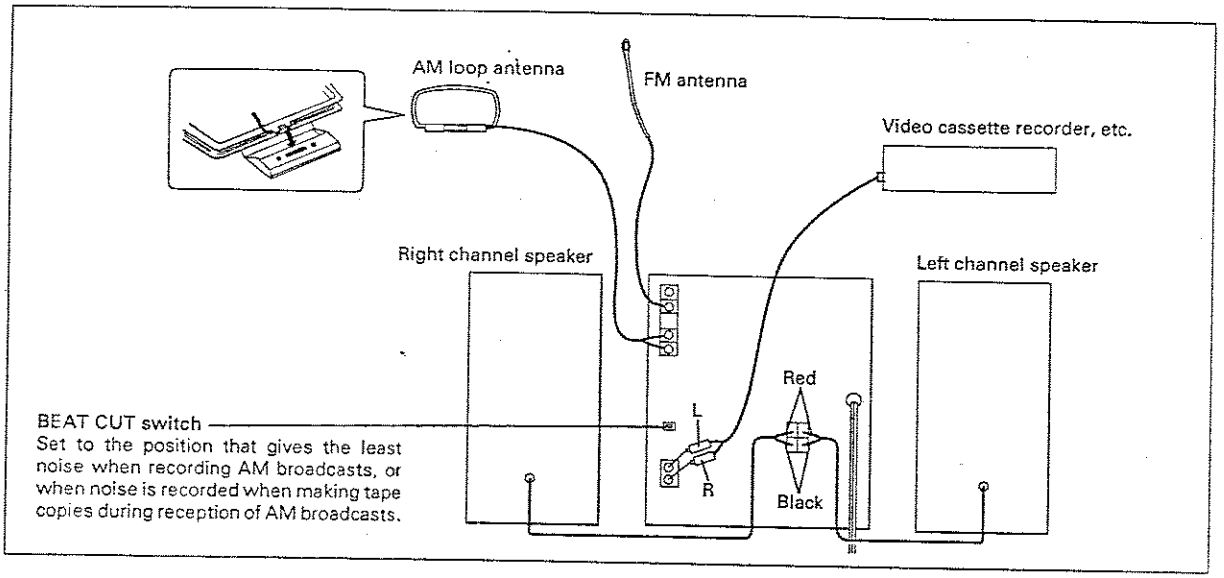
When operating the remote control unit, point the unit's infrared signal transmitter at the remote sensor window on the front panel of the CD player. The remote control unit can be used within a range of about 7 meters (23 feet) from the remote sensor, and within angles of up to about 30 degrees.



NOTES:

- *If there is any obstacle between the remote control unit and the remote sensor window, or if the unit is held at too large an angle relative to the remote sensor window, the signal from the remote control unit will fail to reach the remote sensor.*
- *If the unit is operating in the vicinity of other appliances generating infrared rays, or if other remote control devices using infrared rays are used near the unit, the unit may operate improperly. Conversely, if the receiver's remote control unit is operated in the vicinity of another appliance which uses an infrared remote control device, the other appliance may operate improperly. If this should happen, change the place of installation so that improper operation does not occur.*
- *If the range of operation of the remote control unit becomes too short, replace the batteries.*
- *When the unit is not to be used for a long period of time (more than one month), remove the batteries to prevent them from leaking inside the compartment. If leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.*
- *Do not place books or other objects on the remote control unit, since they might depress the keys and run down the batteries.*
- *If the remote control sensor window is in a position where it receives strong light such as sunlight or fluorescent light, control may not be possible.*

CONNECTIONS

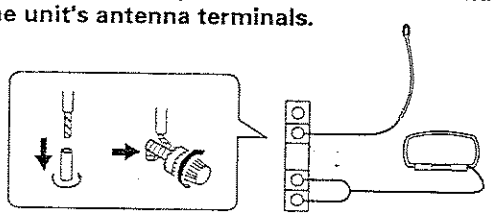

AM loop antenna
FM antenna
Video cassette recorder, etc.
Right channel speaker
Left channel speaker
Red
L
R
Black
BEAT CUT switch
Set to the position that gives the least noise when recording AM broadcasts, or when noise is recorded when making tape copies during reception of AM broadcasts.

- Plug the power cord into the AC wall outlet only after all the connections have been completed.
- Be sure to connect an antenna. If you do not, broadcast signal reception will not be possible.

1 Assemble AM loop antenna.

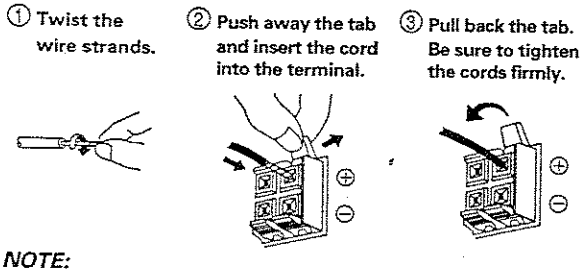
- To permanently fix the antenna, screw the leg to a wall or something similar before assembling.

2 Connect AM loop antenna and FM antenna to the unit's antenna terminals.



3 Connect the speaker cords to the speaker terminals.

Connect the red cords to the "+" (red) terminals and the black cords to the "–" (black) terminals.


① Twist the wire strands.
② Push away the tab and insert the cord into the terminal.
③ Pull back the tab. Be sure to tighten the cords firmly.

NOTE:

Do not allow the conductors of the cords to project out of the terminals or to come into contact with other conductors. A breakdown or failure may occur when conductors touch.

Speaker impedance

Connect speaker systems with a nominal impedance ranging from 8 to 16 Ω.

4 When connecting a video cassette recorder, connect the audio output jacks to the VIDEO INPUT jacks of this unit.

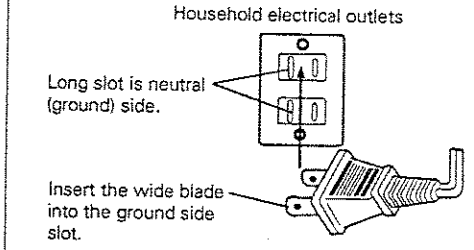
5 Finally, connect the power cord to the AC wall outlet.

NOTE:

Insert the plugs securely into the jacks. Improper connection can lead to sound distortion or malfunction.

CONNECTING THE POWER CORD
(For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.

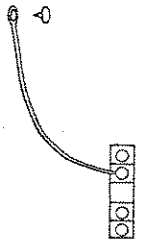


ANTENNA CONNECTIONS

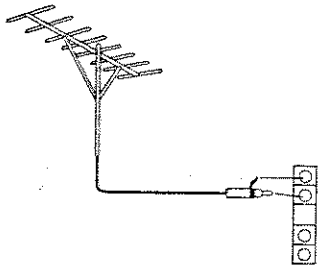
Radio reception is not possible unless the antenna is properly connected.
The strength of broadcast signals varies from one area to another. Signal propagation is especially poor in metropolitan areas, where there are many tall buildings, and in mountainous areas. Proper antenna installation is vital to good reception.

FM ANTENNA

FM antenna
Stretch the antenna and affix it to a wall, etc..



External FM antenna installation
Use an external antenna when the signals from stations are weak and cannot be picked up by the accessory FM antenna, or when the sound heard is accompanied by large amounts of noise.



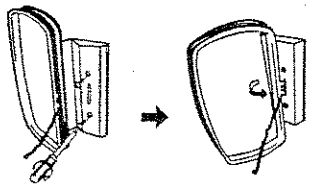
AM ANTENNA

The antenna should be placed at a distance from the tuner, and should not be allowed to touch metallic objects. Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

- Place the antenna on a level surface and rotate it to find the orientation that yields the best reception.

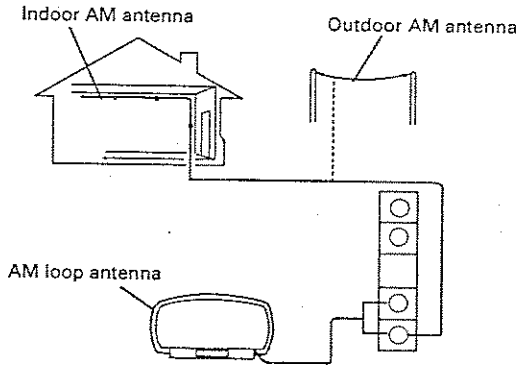
To attach the antenna to a wall, etc.

1. Select the place to attach the antenna that yields the best reception.
2. Screw the leg to the wall, etc.
3. Insert the clip on the bottom of the antenna into the groove on the leg.



External AM antenna
Indoor AM antenna
Provide a vinyl-coated wire (5 to 6 meters long). Secure one end to the AM terminal and the other end to a wall or other high location.
Outdoor AM antenna
If reception is still poor even when a lead antenna has been fully extended indoors, stretch out a vinyl-coated wire and secure it outdoors.

NOTE:
Do not detach the AM loop antenna when using the external AM antenna.



FM/AM CHANNEL STEP SWITCH

(For multi-voltage model)
This switch is not provided on models for Australia, U.S. and Canada. Adjustment is only necessary when there is a CHANNEL STEP switch at the rear panel.
The CHANNEL STEP switch is located on the rear panel of the stereo CD cassette deck receiver. Before the tuner leaves the factory, this switch is set to the channel step standard of the areas where the tuner is sold.
Depending on the position of this switch, each time TUNING is pressed, the frequency display changes by the following amount:

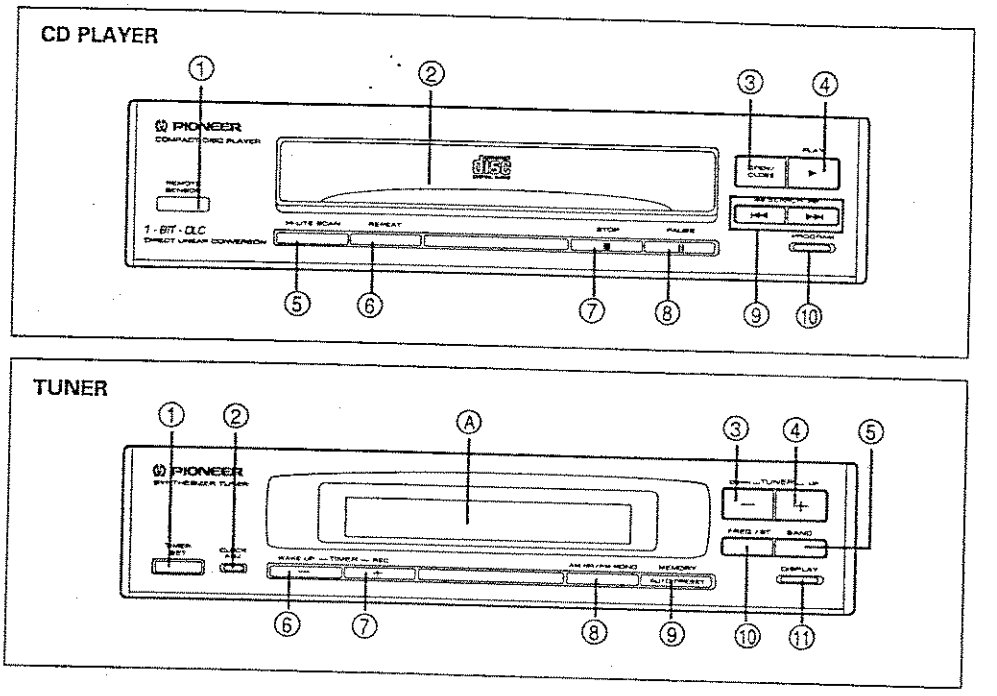
[100 kHz/10 kHz] position
For areas with a channel step of 100 kHz for FM and 10 kHz for AM.

[50 kHz/9 kHz] position
For areas with a channel step of 50 kHz for FM and 9 kHz for AM.

NOTE:
If the switch is set to the wrong position, correct tuning may not be possible.

Consult your dealer if you are not sure about the radio channel step standard in your area.

NAMES AND FUNCTIONS OF PARTS



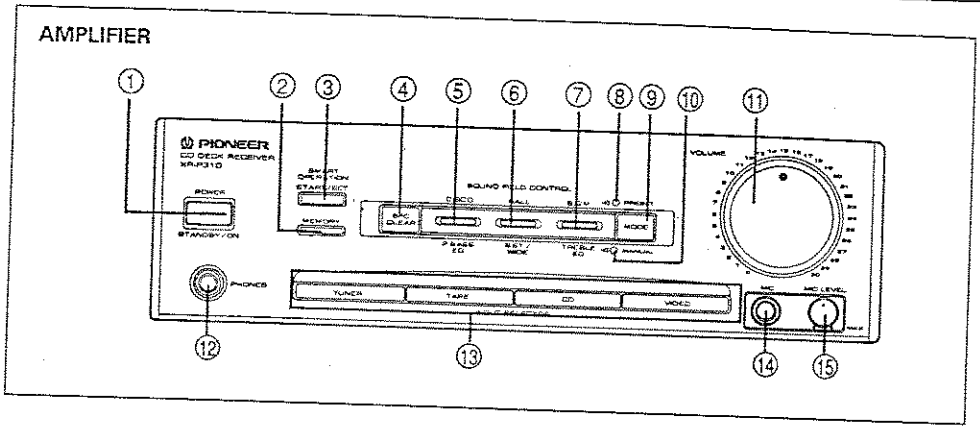
CD PLAYER

① REMOTE SENSOR window
② Disc tray
③ OPEN/CLOSE button (p. 17)
④ PLAY button (►) (p. 17)
⑤ HI-LITE SCAN button (p. 19)
⑥ REPEAT button (p. 19)
⑦ STOP button (■) (p. 17)
⑧ PAUSE button (❚❚) (p. 17)
⑨ SEARCH buttons (◄◄/►►, I◄◄/►►I) (p. 18)
⑩ PROGRAM button (p. 20)

TUNER

① TIMER SET button (p. 11, 30, 32)
② CLOCK ADJ. button (p. 11)
Ⓐ Display (p. 10)
③ TUNER DOWN/– button (p. 12, 15)
④ TUNER UP/+ button (p. 12, 15)
⑤ BAND button (p. 12)
⑥ TIMER WAKE-UP/– button (p. 11, 30, 32)
⑦ TIMER REC/+ button (p. 11, 30, 32)
⑧ AM-NR/FM-MONO button (p. 12)
⑨ MEMORY/AUTO PRESET button (p. 13, 14)
⑩ FREQ./ST. button (p. 12, 15)
⑪ DISPLAY button (p. 12, 18)

AMPLIFIER



AMPLIFIER

① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness. (The display shows only the time.)

② SMART OPERATION MEMORY button (p. 29)

③ SMART OPERATION START/SET button (p. 29)

④ SFC CLEAR button (p. 28)

⑤ DISCO/P.BASS EQ button (p. 28)

⑥ HALL/S.ST./WIDE button (p. 28)

⑦ B.G.M./TREBLE EQ button (p. 28)

⑧ PRESET mode indicator (p. 28)

⑨ MODE button (p. 28)

⑩ MANUAL mode indicator (p. 28)

⑪ VOLUME control

⑫ Headphones jack (PHONES)

⑬ INPUT SELECTOR buttons (TUNER/TAPE/CD/VIDEO)

⑭ Microphone jack (MIC) (p. 27) (Except for U.S. and Canadian models)

⑮ MIC LEVEL control (p. 27) (Except for U.S. and Canadian models)

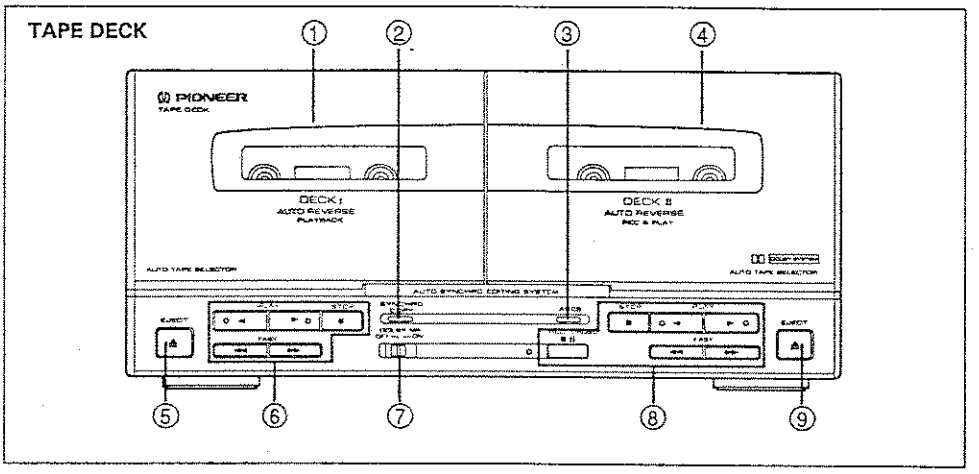
Auto Function

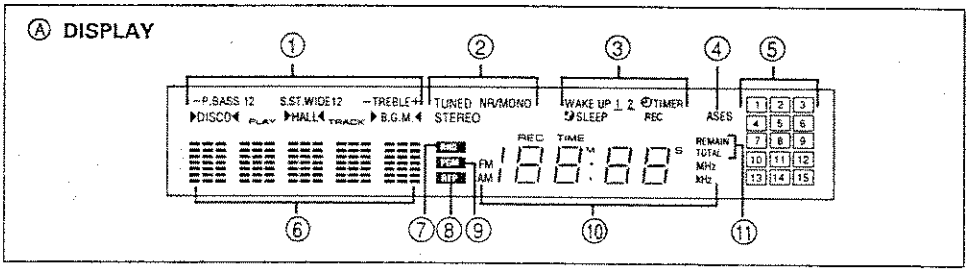
This model is equipped with "Auto Function" operation, so when the switch for CD PLAY, RANDOM, PLAY (tape), TUNER UP/DOWN (+/–) or BAND is pressed, the function switches automatically. Use the VIDEO function button to select the component connected to the VIDEO jacks, since Auto Function is not effective for this.

NOTE:

The function cannot be switched during recording except for tape copying. (Auto Function does not operate either.)

NAMES AND FUNCTIONS OF PARTS





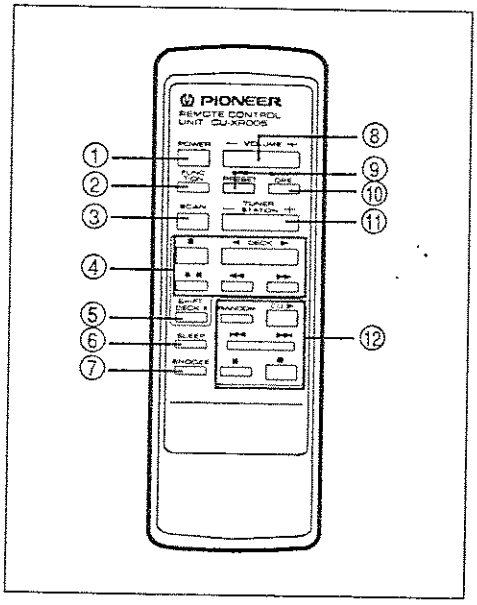
TAPE DECK

① **DECK I cassette door**
② **SYNCHRO COPY button (p. 25)**
③ **ASES (Auto Synchro Editing System) button (p. 26)**
④ **DECK II cassette door**
⑤ **DECK I EJECT button (⏏) (p. 22)**
⑥ **DECK I operation buttons (PLAY ◄ ►, STOP ■, FAST ◄◄ ►►) (p. 22, 23)**
⑦ **DOLBY* NR switch (p. 22)**
⑧ **DECK II operation buttons (PLAY ◄ ►, STOP ■, FAST ◄◄ ►►, REC PAUSE ● II) (p. 22, 23, 24)**
⑨ **DECK II EJECT button (⏏) (p. 22, 24)**

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.

Ⓐ DISPLAY

① **Sound field control indicators**
Display SOUND FIELD CONTROL settings.
② **Tuner indicators**
Indicate the tuning mode.
③ **Timer indicators**
Display timer settings.
④ **A.S.E.S. (Auto Synchro Editing System) indicator**
Lights when A.S.E.S. is performed.
⑤ **Music calendar**
⑥ **Function display**
Displays the selected function. In the TUNER mode, this displays the station No., and when playing a CD it displays the track No.
⑦ **Random indicator**
⑧ **Repeat indicator**
⑨ **Program indicator**
⑩ **Frequency/Time display**
In TUNER mode, frequency is displayed. In any other mode it displays the time.
⑪ **REMAIN/TOTAL indicator**
In CD mode, "REMAIN" shows the remaining play time and "TOTAL" shows the total play time.



REMOTE CONTROL UNIT

① POWER button

② FUNCTION button

Each time this button is pressed, the function changes in the following sequence: TUNER → TAPE → CD → VIDEO →

③ SCAN button

In TUNER mode: This button is used for scanning preset stations **(p. 15)**

In CD mode: This button is used for Hi-Lite Scan. **(p. 19)**

④ DECK operation buttons

(◄ ► DECK Play, ■ Stop, ◄◄ ►► Fast, ● II Rec pause) (p. 22, 23, 24)

⑤ SHIFT DECK II button

To operate Deck II, press the desired deck operation button while pressing this button.

⑥ SLEEP button (p. 31)

⑦ SNOOZE button (p. 31)

⑧ VOLUME –/+ button

⑨ SFC PRESET button (p. 28)

Each time this button is pressed, the SOUND FIELD CONTROL setting changes in the following sequence: DISCO → HALL → BGM → SFC clear

⑩ SMART OPE. button (p. 29)

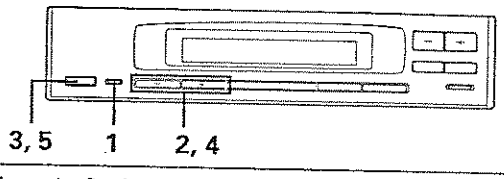
⑪ TUNER STATION –/+ button (p. 14, 15)

⑫ CD operation buttons

(► Play, ■ Stop, II Pause, |◄◄ ►►| Track search, RANDOM) (p. 17, 18, 19)

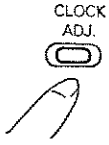
SETTING THE CLOCK

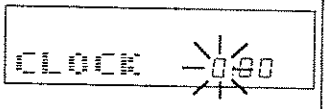
- Set the clock when it has been incorrectly set, or when power has been cut to the unit.
- This clock provides a 24 hour display.
- The clock cannot be set by remote control.



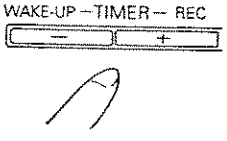
Example: Setting the clock to 18:40

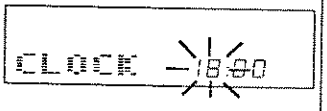
1 Press CLOCK ADJ.



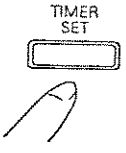


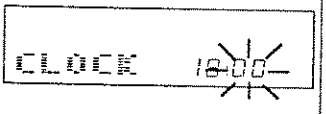
2 Use WAKE-UP (–) and REC (+) to set the hour.



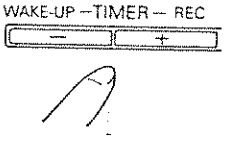


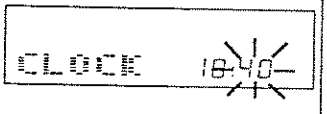
3 Press TIMER SET.



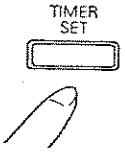


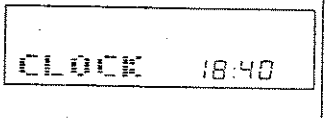
4 Use WAKE-UP (–) and REC (+) to set the minute.





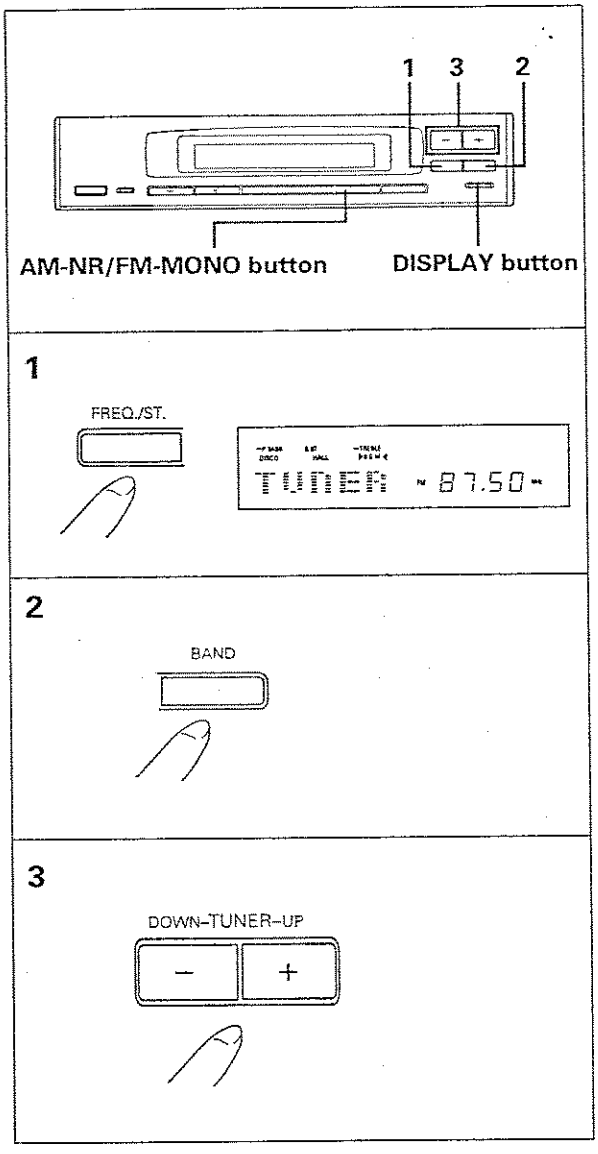
5 Press TIMER SET when "00" seconds of that minute are reached for precise adjustment.





- After connecting to an AC outlet, be sure to set the present time. Timer playback and timer recording are not possible unless the time has been set.
- The time indication will appear as "- -:- -" if the AC power cord is unplugged or a power failure occurs. Be sure to set the time again upon reconnecting power.

TUNING INTO STATIONS



Operations indicated by the [ ] mark are performed with the remote control unit.

- Broadcast reception is not possible unless an antenna is connected, so be sure to connect one.

1 Press FREQ./ST. to select frequency mode.
"TUNER" appears in the display.

2 Select AM or FM with BAND.

3 Press TUNER UP (+) for higher frequencies or DOWN (–) for lower frequencies.
The TUNED indicator lights up when a station of sufficient signal strength is tuned in.

• One step tuning
Press TUNER UP (+) or DOWN (–) and release quickly. The frequency will change by one step* each time the button is pressed. Press as many times as necessary to tune in the desired station.

*One step
Australian model ..... FM: 50 kHz, AM: 9 kHz
U.S. and Canadian models ..... FM: 100 kHz, AM: 10 kHz
Multi-voltage model
Depending on the position of the FM/AM CHANNEL STEP switch on the rear panel, one step changes as follows.
[100 kHz/10kHz] position ..... FM: 100 kHz, AM: 10 kHz
[50 kHz/9kHz] position ..... FM: 50 kHz, AM: 9 kHz

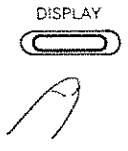
• Auto tuning
Press TUNER UP (+) or DOWN (–) until the frequency starts to change (1-2 sec.), then release it. The tuner will automatically search for a broadcasting station and stop when one is found, and the TUNED indicator lights up. To search for another station, press again.

• High speed manual tuning
Keep TUNER UP (+) or DOWN (–) pressed. The frequency changes continuously, and stops when the switch is released.

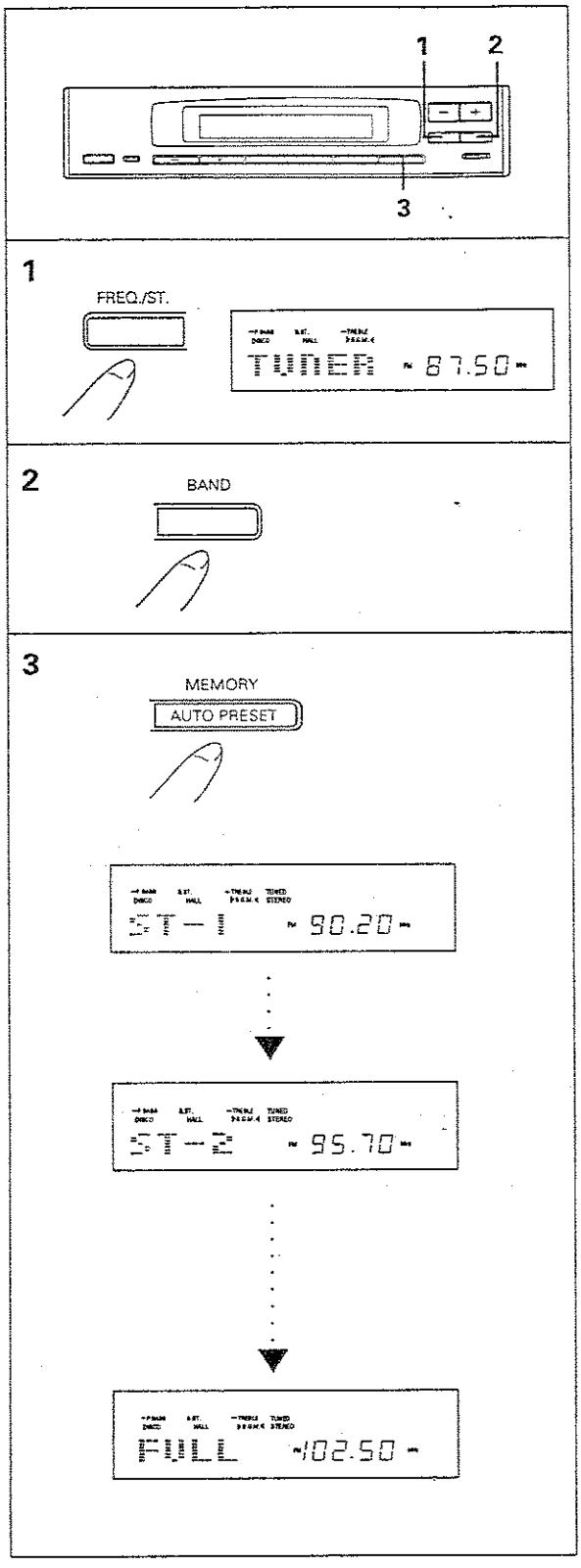
AM-NR/FM-MONO button
During AM reception: Cuts out AM broadcast noise to give you a much clearer sound.
During FM reception: Switches between stereo and monaural modes when listening to a stereo broadcast. If there is a lot of noise in the stereo position, switch to MONO and the noise will be suppressed.

Last station memory
The last received AM and FM stations remain stored regardless of function and/or POWER switching.

To change the display mode:
Each time DISPLAY is pressed, the display switches between tuner mode and the current time.



MEMORIZING STATIONS



Auto presetting

Up to 24 FM/AM stations can be automatically memorized.

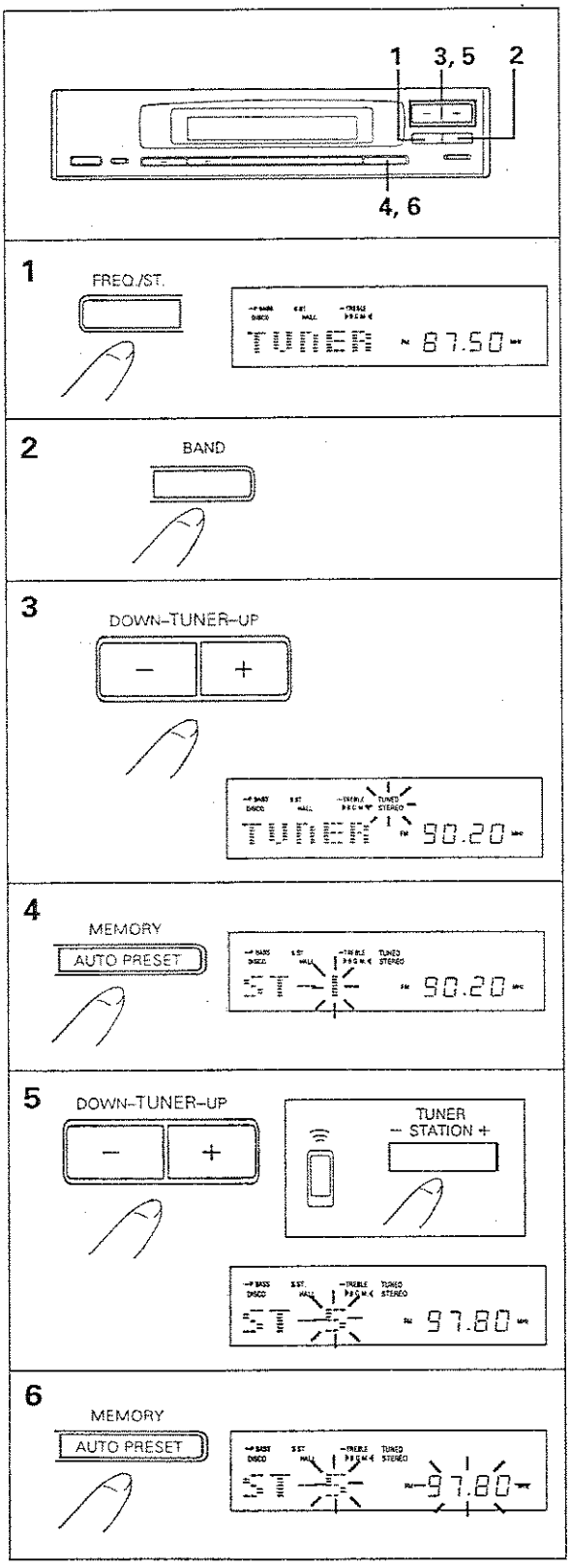
1 Use FREQ./ST. to select frequency mode.
"TUNER" appears in the display.

2 Select AM or FM with BAND.

3 Keep MEMORY pressed for more than 5 seconds.
Auto presetting starts from the current station.
The reception frequencies are scanned for receivable stations and they are automatically stored in the station memory starting from ST-1.
When 24 stations are stored, "FULL" appears on the display.

NOTE:
To cancel the auto presetting operation, press BAND, TUNER UP (+) or TUNER DOWN (–).

MEMORIZING STATIONS



Manual presetting

- Up to 24 FM/AM stations can be memorized at random.
- For FM reception, the FM-MONO setting can be memorized. For AM reception, the AM-NR ON or OFF setting can be memorized.

1 Press FREQ./ST. to select frequency mode.
"TUNER" appears in the display.

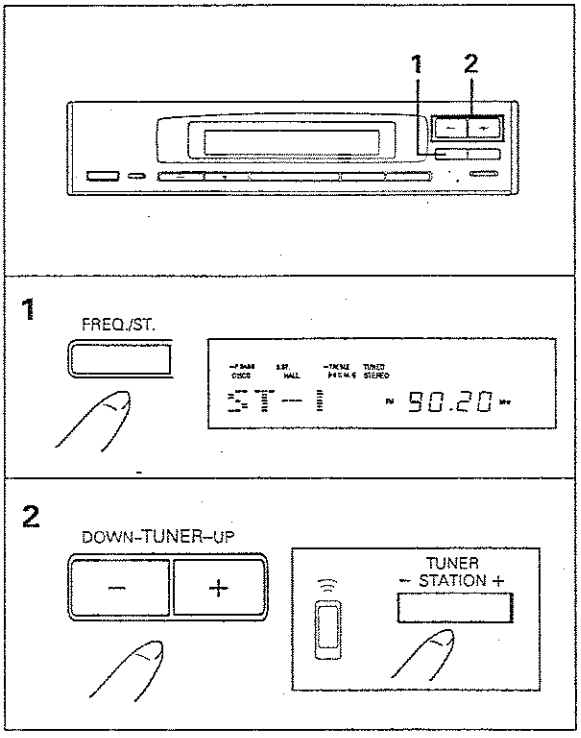
2 Select AM or FM with BAND.

3 Tune in the desired station with TUNER UP (+) or DOWN (–).

4 Press MEMORY/AUTO PRESET.
Station No. appears in the display.

5 Select the station number to be memorized with TUNER UP (+)/DOWN (–).
Operate while the display is flashing (it flashes for about 5 seconds).

6 Press MEMORY/AUTO PRESET.
Operate while the display is flashing (it flashes for about 5 seconds).
The displayed frequency is stored in the selected station No. Repeat steps 2 through 6 to memorize up to 24 stations.



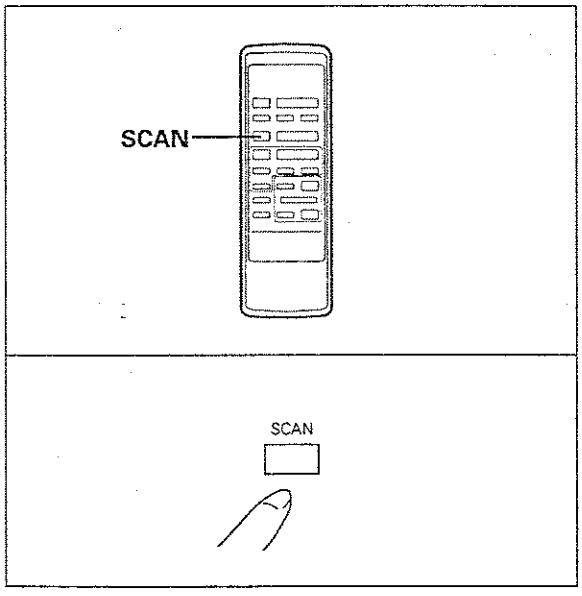
Station call

1 Press FREQ./ST. to select station mode.
Station No. appears in the display.

2 Select the station No. you want to recall with TUNER UP (+) or DOWN (–).

NOTES:

- *The memorized stations will not be erased even if the power is turned off. However, if the AC power cord is unplugged or a power failure occurs, the memorized stations will be erased. (If the AC power cord is unplugged, the memorized stations will be preserved for several days.)*
- *If the memorized stations have been erased, memorize them again.*



Scanning memorized stations

1 Press SCAN on the remote control unit during station reception.
Each memorized station is tuned in for about 5 seconds.

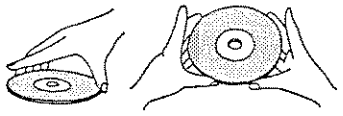
2 Press SCAN again as soon as the desired station is tuned in.

CAUTIONS REGARDING COMPACT DISC HANDLING

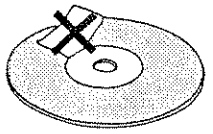
CARE OF DISCS

- With this player, use discs which display the mark shown below. (Optical audio digital discs.)

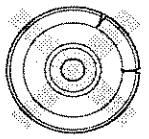
- When holding discs, do not touch their signal surfaces. Hold by the edges, or by one edge and the center hole.



- Do not affix gummed labels or tape to the label surfaces. Also, do not scratch or damage the label.

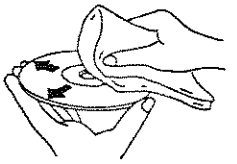


- Discs rotate at high speed inside the player. Do not use damaged (cracked or warped) discs.

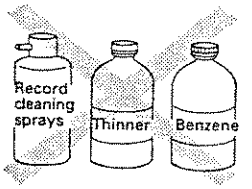


CLEANING DISCS

- Fingerprints or smudges on the surface of a disc will not directly affect the recorded signals, but depending on the degree of contamination, the brightness of the light reflected from the signal surfaces may be reduced, causing degradation of sound quality. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery.

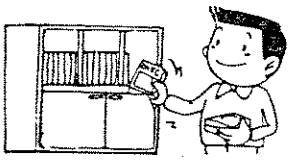


- If a disc becomes very dirty, dip a soft cloth in water, and after wringing it out well, wipe the dirt away gently. Remove any water drops with another soft, dry cloth.
- Do not use record cleaning sprays or anti-static agents on discs. Never clean discs with benzene, thinner, or other volatile solvents, since damage to the disc surface may result.



STORING DISCS

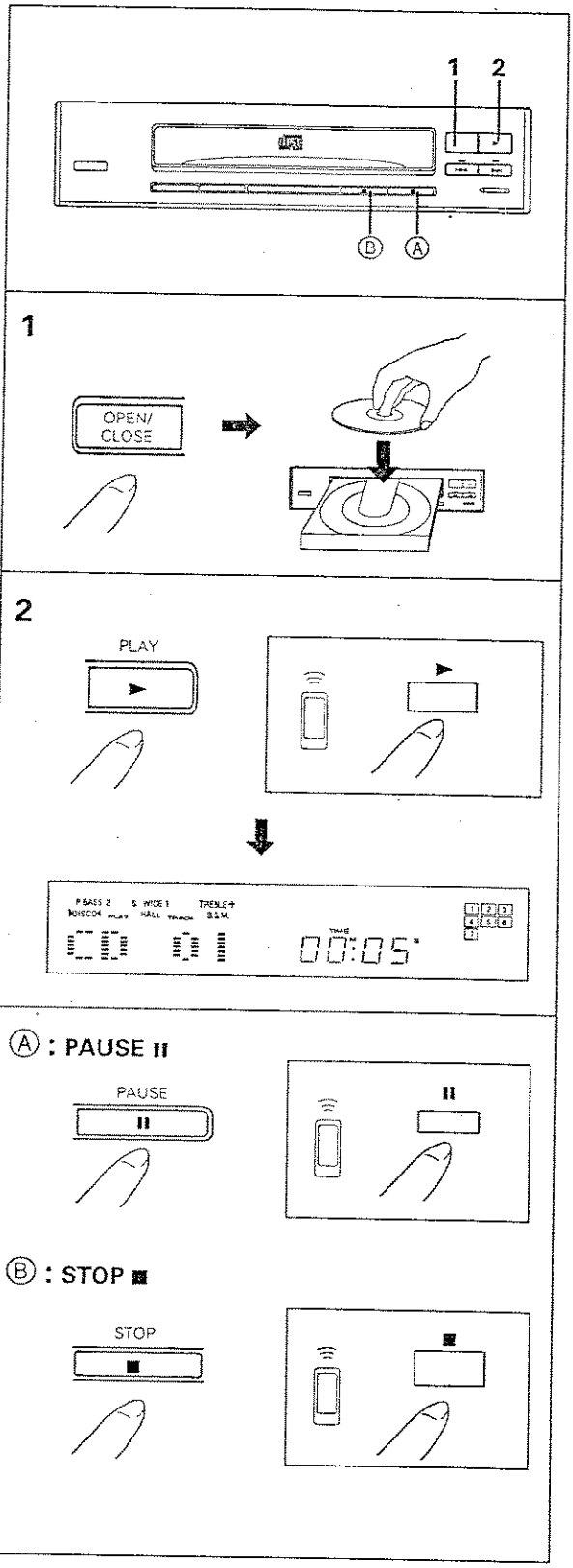
- Discs are made of the same kinds of plastic used for conventional analog audio records. Be careful not to allow discs to warp; always store discs in their cases vertically, avoiding locations with high heat or humidity, or extremely low temperatures. Avoid leaving discs in cars, since the seat of a car in direct sunlight can become extremely hot.
- Always read and abide by the precautionary notes listed on disc labels.



CD LENS CLEANER

The player's pickup lens should not become dirty in normal use, but if for some reason it should malfunction due to soiling, ask your nearest PIONEER authorized service center. Lens cleaners for CD players are commercially available, but special care should be exercised in their use since some may cause damage to the lens.

LISTENING TO COMPACT DISCS



To play a compact disc

1 Press OPEN/CLOSE and load a disc with the label surface facing up.
2 Press PLAY ► to start playback.

Ⓐ To pause playback temporarily:
Press PAUSE II.
Pressing PAUSE II again or PLAY ► resumes playback from the position where pause mode was entered.

Ⓑ To stop playback:
Press STOP ■.

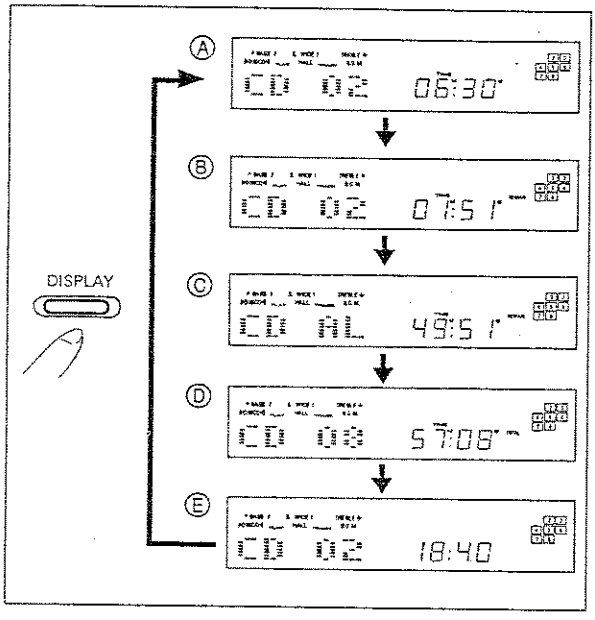
NOTE:

- *When setting an 8 cm CD single, do not use the 8 cm CD single adaptor.*
- *Never attempt to load both 8 cm and 12 cm discs together, since disc damage or other malfunctions may result. Always load only one disc at a time.*

To remove a disc

1. Press OPEN /CLOSE to open the disc tray.
2. Remove the disc and return it to its protective case.
3. Press OPEN/CLOSE to close the disc tray.

Caution:
Do not unplug the power cord during playback, as this could result in damage to the disc.



Time display

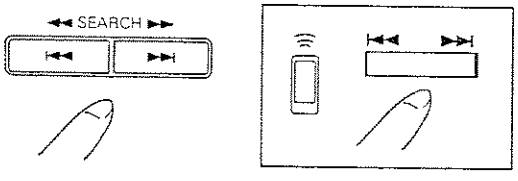
During playback, pressing the DISPLAY button changes the time display in the following sequence: Ⓐ TIME (elapsed playback time of the track being played) → Ⓑ REMAIN (remaining playback time of the track being played) → Ⓒ AL REMAIN (remaining playback time from the playing point to the end of the disc) → Ⓓ TOTAL (total number of tracks and total playback time of the disc) → Ⓔ Current time.

- With track No. 30 or above, REMAIN time Ⓑ cannot be displayed.
- During Program playback, the remaining time of all programmed tracks can be displayed with the AL REMAIN Ⓒ setting. The total time of the programmed tracks can be displayed with the TOTAL setting Ⓓ.
- If track No. 30 or more is programmed or the total playback time exceeds 100 minutes, REMAIN time Ⓑ, AL REMAIN time Ⓒ and TOTAL time Ⓓ cannot be displayed.

VARIOUS OPERATIONS

Track search - To search for a particular track

During normal playback, stop mode, pause mode or program playback

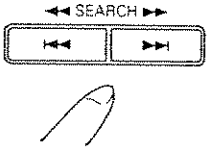


When ►►I is pressed once or a number of times, playback is advanced to the beginning of a track located after the track being played. The position of the located track corresponds to the number of times the button is pressed.
When I◄◄ is pressed once, playback returns to the beginning of the track being played. When this button is pressed more than once, playback is returned to a track located before the track being played. The position of the located track corresponds to the number of times the button is pressed.

NOTE:
During program playback, Track Search can be carried out in the programmed order.

Manual search - To search for a particular passage

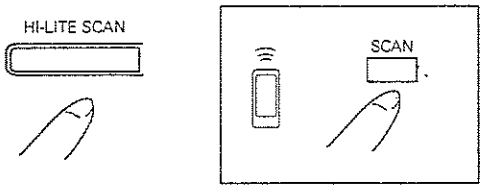
During playback or pause mode



While ►►I/►► is kept pressed, playback rapidly advances toward the end of the disc. When playback reaches the end of the disc, the player enters pause mode and "End" is displayed. While ◄◄/I◄◄ is kept pressed, playback rapidly reverses toward the beginning of the disc.
When the desired passage is reached, release ►►I/►► or ◄◄/I◄◄. The player enters the original mode (playback or pause) where ►►I/►► or ◄◄/I◄◄ is released.

- During program playback, Manual Search can be carried out in one program step only. When playback reaches the beginning of the track, the player enters pause mode. To resume playback, press PLAY ► or PAUSE II.

Hi-Lite Scan - To search by playing a portion of each track



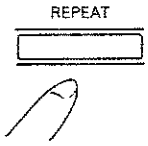
During stop mode:
When HI-LITE SCAN is pressed, playback starts from a point 1 minute after the beginning of the track, and each track is played for about 10 seconds.

During playback mode:
When HI-LITE SCAN is pressed, the player memorizes the time of the current point and playback starts from the memorized time; each track is played for about 10 seconds.

To exit Hi-Lite Scan mode
Press STOP ■ or PLAY ►. When PLAY ► is pressed, normal playback starts from the current point.

NOTE:
When the playback time of a track is less than one minute or is shorter than the memorized time, Hi-Lite Scan playback is carried out from the beginning of the track for about 10 seconds.

To repeat playback (repeat play)

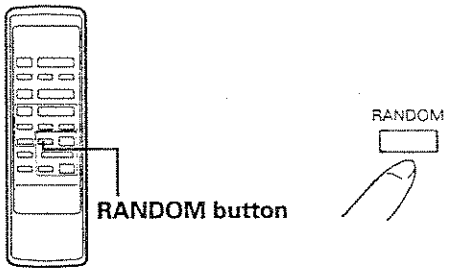


When REPEAT is pressed during playback or stop mode, all tracks will be repeated. (REP indicator lights.)
In the repeat mode, programmed play, random play and Hi-Lite Scan will be repeated.

- To exit repeat mode, press REPEAT so that REP indicator goes off.

To repeat a single track
After a track to be repeated is programmed , press REPEAT.
(See "Program playback" on page 20.)

Random playback - To play all tracks in random order

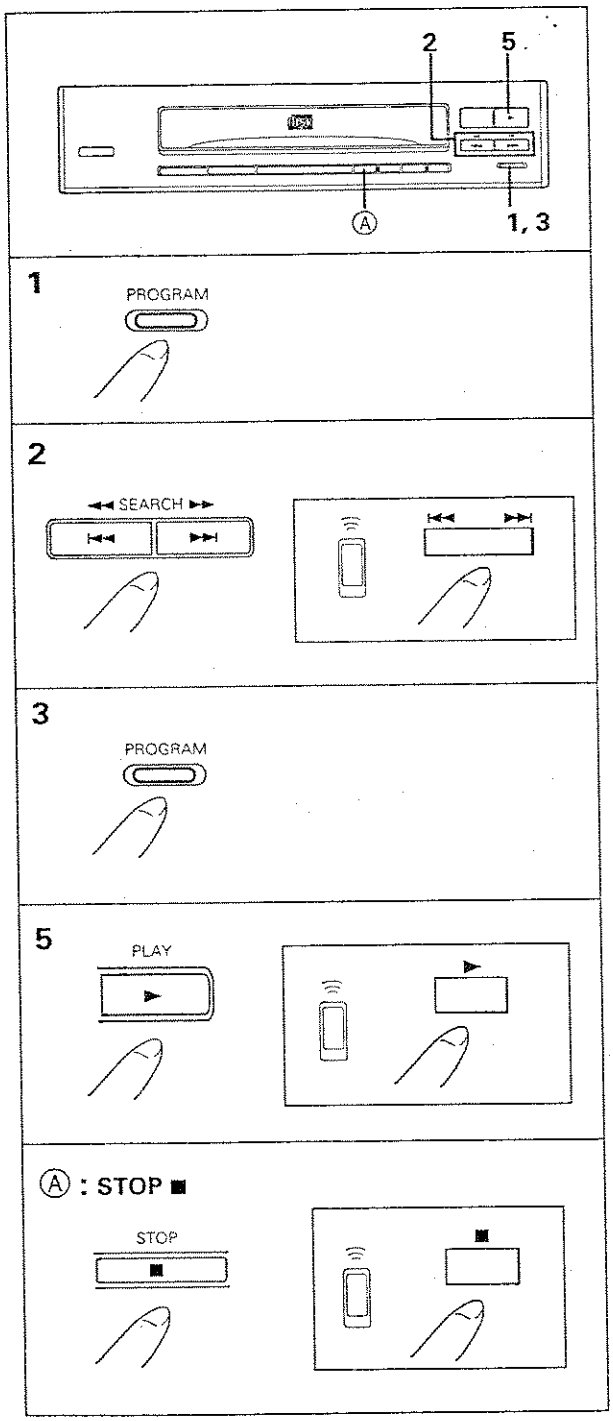


Press RANDOM on the remote control unit.
The RND indicator lights and all tracks are played in a random order.
After all the tracks are played, the player enters stop mode.

- To stop random playback, press CD Stop (■).

NOTE:
Programmed tracks cannot be played in a random order.

TO PLAY ONLY DESIRED TRACKS



Program playback - To program tracks in desired order

1 **During stop mode, press PROGRAM.**
- PGM indicator lights.

2 **Press SEARCH (⏮/⏭) so that the desired track number appears on the display.**

3 **Press PROGRAM.**

4 **Repeat steps 2 and 3 for other tracks to be programmed.**
- Up to 24 steps can be programmed.

5 **Press PLAY ►.**
The tracks are played in the programmed order. When all programmed tracks have been played, the player enters stop mode.

Ⓐ **To stop Program playback, press STOP ■.**

- To go to the previous or next step in a program, press SEARCH (⏮/⏭).
- Each time a selection is programmed, the display will show the programmed number.
- If PROGRAM is pressed during playback, the PGM indicator lights but programming cannot be carried out.

Programming a pause

Inserting a pause in your program can be very useful when carrying out recording. Press PAUSE ❚❚ instead of entering a track number. "PA" appears on the display panel.

- For example, when recording on both sides of a cassette tape, if you program a pause after the last track to be recorded on the first side, program playback will pause at that point to allow you to switch tape sides. To resume program playback after the player enters pause mode, press PAUSE ❚❚.

NOTES:
- *A pause cannot be programmed at the beginning of a program, nor can two pauses be programmed one after the other.*
- *A pause inserted in a program is counted as one step.*
- *If a pause is programmed as the last step of a program, the player will not enter pause mode.*

To clear all of the program contents

During stop mode:
Press STOP ■ or OPEN/CLOSE.

During playback mode:
Press STOP ■ twice or OPEN/CLOSE once.

HOW TO HANDLE CASSETTE TAPES

CHECK CASSETTE BEFORE USE

Bear in mind the following points before loading a cassette tape.

Is the tape loose, or is some of the tape sticking out of the cassette?

If some of the tape is projecting outside the cassette shell or if the tape is loose, it may not feed between the capstan and pinch roller. This will prevent the tape from being transported or damage the tape itself. In cases like these, insert a pencil into the reel hole and take up the slack. (Fig. A) Some cassette tapes come with a plastic or thick paper stopper which prevents tape slack. Remove this stopper when loading the tape and replace it after having used the cassette.

How can you prevent accidental erasure?

A cassette is provided with accidental erasure prevention tabs so that important recordings will not be erased accidentally. When the tab (Fig. B) on the cassette shell is broken out with the tip of a screwdriver, it will not be possible to activate the recording function even by pressing the recording (REC) button, so valuable recordings will not be erased in error.
To re-record on a cassette whose tabs have been broken out, simply stick a piece of doubled adhesive tape over the tab areas, as shown in Fig. C.
In case of metal tape or chrome tape, take sufficient care that the detection hole is not blocked.
When this hole is blocked, the automatic tape selector mechanism does not operate correctly.

NOTE:
The accidental erasure prevention tabs are located at the top left on both sides A and B (1 and 2), so that material on each side can be prevented from being erased in error.

TIPS ON USING CASSETTE TAPES

- Leader tape (which does not allow sound to be recorded over it) is provided at the beginning of a cassette tape. Start recording after allowing the tape to run for approx. 5 seconds so that the leader tape clears the recording head.
- Do not leave a cassette tape exposed to the environment. Store the cassette in its case so that dust and dirt do not adhere to the tape after use, and so that the tape is prevented from becoming slack. Choose a location which is not exposed to the effects of magnetism, dust, dirt or oil for storing the tapes.
- Because C-120 tapes are so thin, they easily jam in the pinch roller and capstan, and they are susceptible to other trouble such as irregular winding. Try not to use them with this unit. Use tapes of 90 minutes or less.

Fig. A

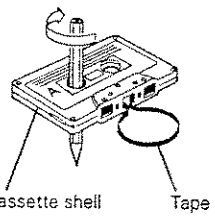


Fig. B

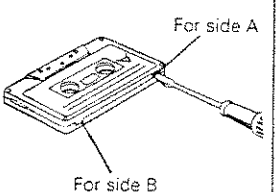
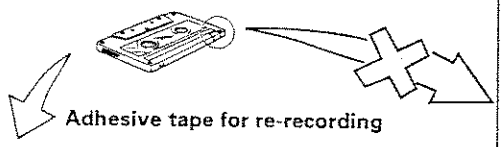


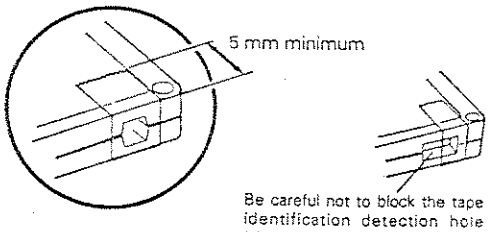
Fig. C

NOTE FOR RE-RECORDING ON A CASSETTE TAPE WHICH HAS A BROKEN TAB



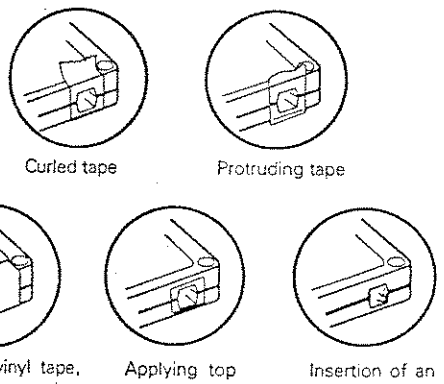
CORRECT METHOD OF APPLYING TAPE

- Apply two layers of cellophane tape.
- Apply the tape tautly so that it does not rise up.



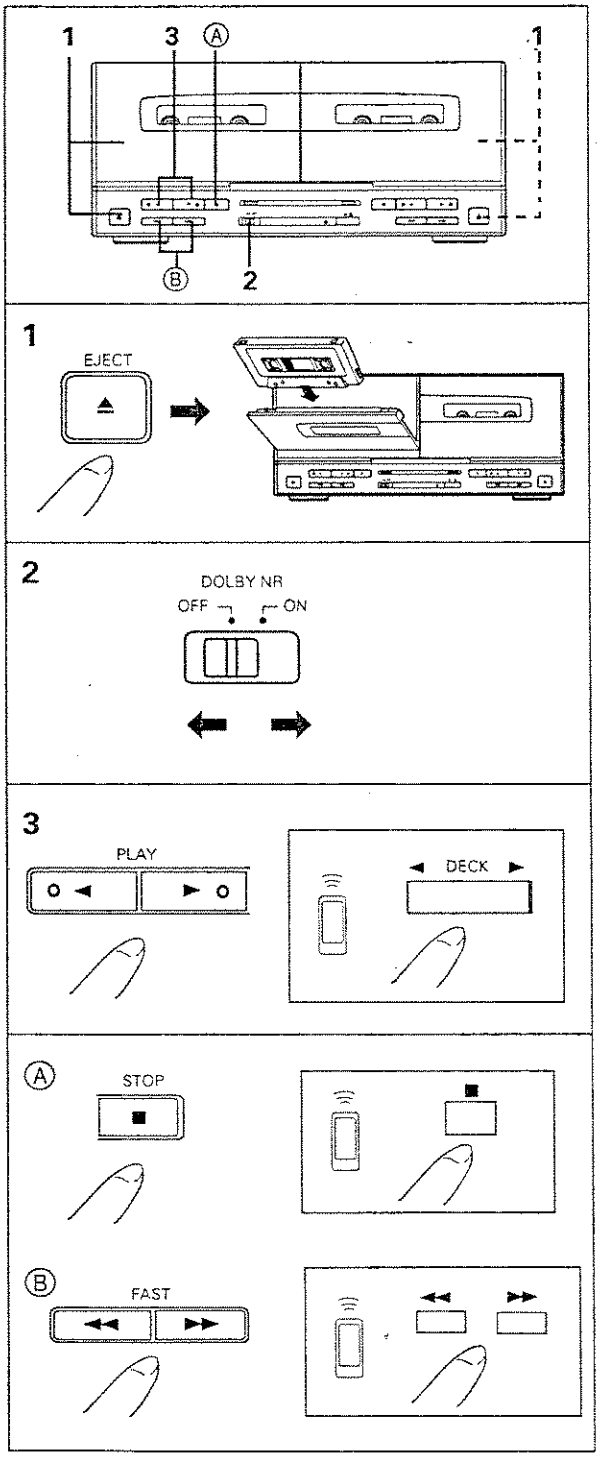
INCORRECT METHOD OF APPLYING TAPE

THIS MAY RESULT IN AN ACCIDENT


Curled tape
Protruding tape
Applying vinyl tape, gum tape, or other tape apart from cellophane tape.
Applying top portion only.
Insertion of an eraser or the like.

After removing the cellophane tape, completely wipe away all traces of adhesive. Use only alcohol.

PLAYING TAPES



Basic operation

- Tapes may be played back in Deck I or Deck II but not in both decks at the same time.

1 Press EJECT ▲ and load a recorded tape, then push in the cassette door until it locks.

2 Set DOLBY NR to the same position used for recording.

Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on.

3 Press PLAY (► or ◄).

►: Forward playback
◄: Reverse playback

Ⓐ To stop playback, press STOP ■.

Ⓑ To fast forward or rewind, press FAST ►►/◄◄.

- This deck automatically plays both sides of a tape.

To operate Deck II with the remote control unit, press the desired deck operation button while pressing SHIFT DECK II.

NOTES:

- *If the power is switched off while the tape is running, you may not be able to open the door. In this case, switch on the power again and press EJECT once more.*
- *Confirm that the deck has stopped before pressing EJECT.*

Auto Stop Mechanism

This mechanism automatically stops the tape when the end of the tape is reached during fast forward or reverse (◄◄ or ►►).

The Dolby NR System

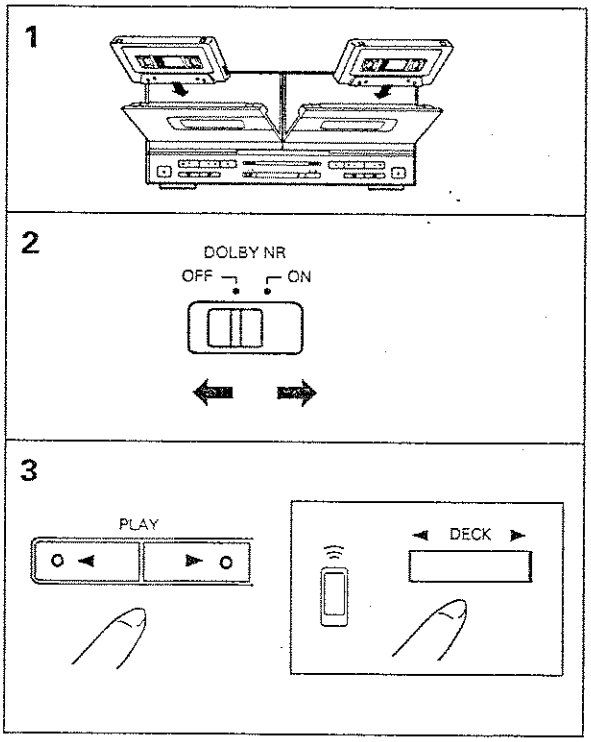
The Dolby NR system are designed to reduce high-frequency noise (tape hiss) generated during playback. The level of low-volume, high-frequency sounds is increased during recording and decreased by the same amount during playback to restore the original level. At the same time, high-frequency noise (the most easily perceived by the human ear) is attenuated as well.

Dolby B-type NR system reduces high-frequency tape noise, widening the dynamic range.

Dolby C-type NR system is even more powerful, applying the noise reduction effect to a wider spectrum of frequencies from the middle range.

For playback always use the same Dolby NR setting that was used for recording.

Avoid playing back tapes recorded using the Dolby NR system with the DOLBY NR switch in the OFF position, or tapes recorded without Dolby NR system with the DOLBY NR switch in the ON position, since this does not allow faithful reproduction of the original sound.



Relay playback

- Relay playback is possible from Deck I to Deck II. When the tape in Deck I has been played, the tape in Deck II automatically starts playing.

1 Load recorded tapes in Deck I and Deck II.

2 Set the DOLBY NR switch to the same position used for recording.

3 Press the appropriate PLAY (► or ◄) on Deck I.

- Relay playback is repeated as follows (4 sides maximum):

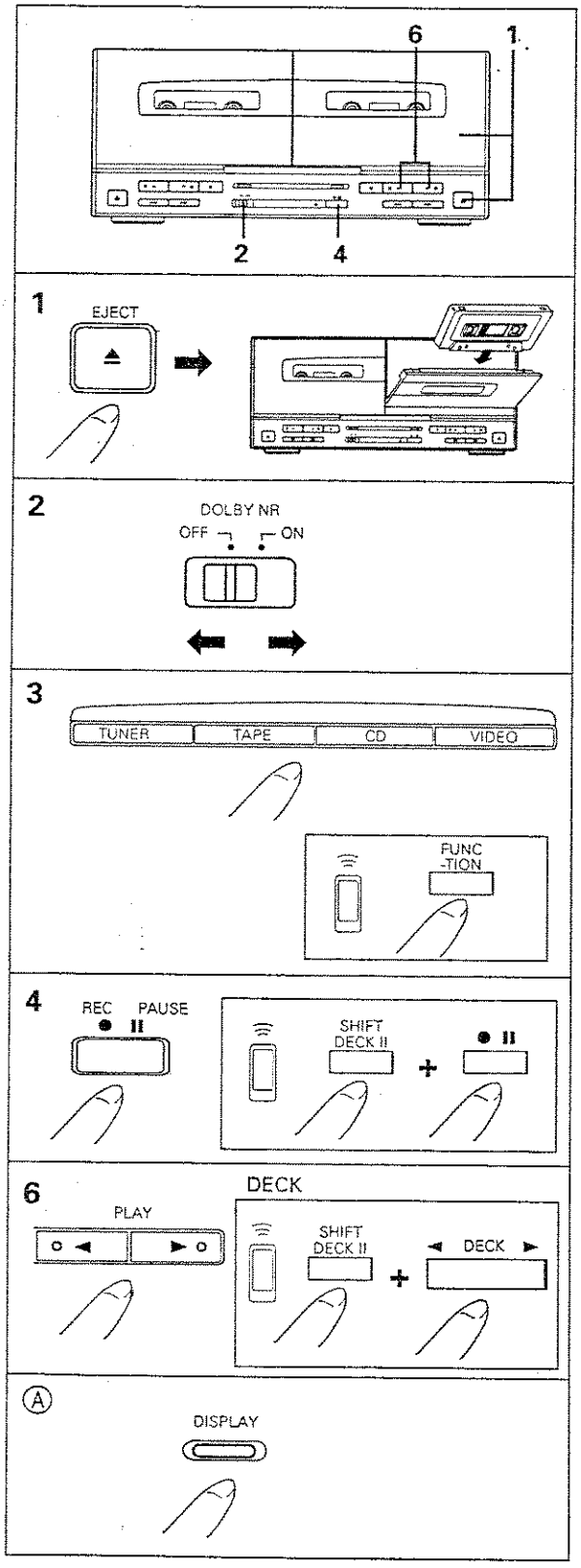
DECK I forward play (►) → DECK I reverse play (◄)
↓
DECK II reverse play (◄) ← DECK II forward play (►)

To stop relay playback:

Press STOP ■ of the operating deck.

- If there is a tape in only one deck, then that deck continuously plays both sides of the tape (12 sides maximum).

RECORDING



Recording on tape

- Material can be recorded on Deck II only. Recording is not possible on Deck I.
- This deck is equipped with an auto-reverse function, so if you record in the ► direction, when recording finishes in that direction it will automatically start recording in the ◄ direction. If you only want to record on one side of the tape, record in the ◄ direction, or break off the accidental erasure prevention tab on the side you don't want to record on.
- Use a normal or chrome tape.

1 Load the tape for recording into Deck II.
- Wind the tape forward past the leader to the start of the magnetic coated portion.

2 Set the DOLBY NR switch to the desired position.
- A tape recorded using the DOLBY NR system must be played back using the same system.

3 Select the program source to be recorded using the INPUT SELECTOR buttons on the receiver.

4 Press REC PAUSE (● II).
The deck enters record-standby mode.

5 Play the program source to be recorded.

6 Press PLAY (► or ◄) to start recording.
- The recording level is automatically adjusted.

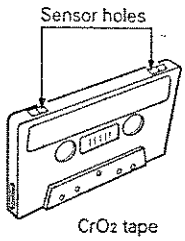
To stop recording:
Press STOP ■.

To stop recording temporarily:
Press REC PAUSE (● II). To resume recording, press PLAY (► or ◄).

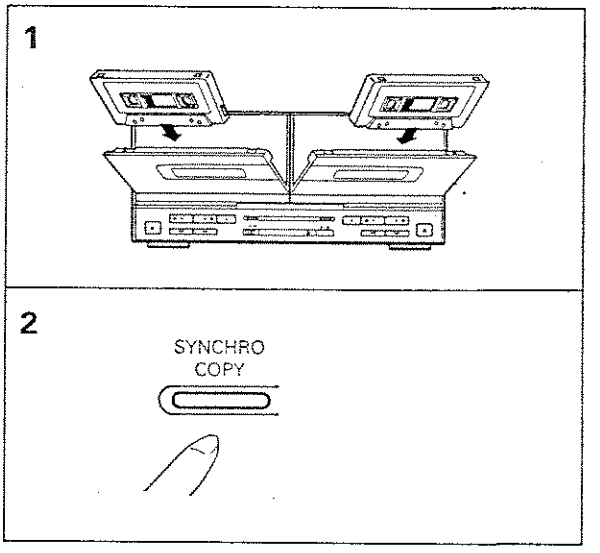
Ⓐ To display elapsed recording time:
Each time DISPLAY is pressed, the display switches between current time and elapsed recording time.

NOTES:
- *The function cannot be switched during recording.*
- *During recording, you can operate the SOUND FIELD CONTROL buttons but the resulting sound is not recorded.*
- *Except for U.S. and Canadian models, microphone mixing sound can be recorded. (See "Microphone mixing" on page 27.)*

AUTOMATIC TAPE SELECTOR FUNCTION
This unit (Deck I and Deck II) is equipped with an automatic tape selector function which utilizes the sensor holes on the tape cassette to determine the type of tape being used, in order to set the deck to match the tape recording bias and equalization.



CrO_2 tape



Copying a tape

The contents of the tape in Deck I can be copied onto the tape in Deck II.

1 Load the recorded tape into Deck I and the tape for recording into Deck II.

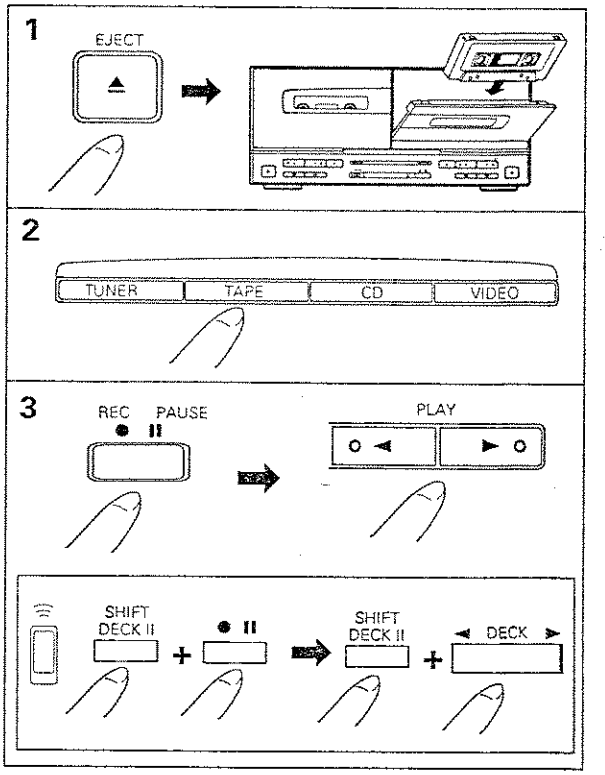
- Wind the tape forward past the leader to the start of the magnetic coated portion.
- Tape copying should begin in the forward direction (►).

2 Press SYNCHRO COPY to start copying.

To stop copying:

Press one of the STOP ■ buttons. Both decks will stop simultaneously.

- If a tape recorded with the DOLBY NR system is copied, the copied tape will also be recorded automatically with the DOLBY NR system regardless of the setting of the DOLBY NR switch. If a tape recorded without the DOLBY NR system is copied, the copied tape will also be recorded automatically without the DOLBY NR system.
- To perform normal copying while listening to playback, set the INPUT SELECTOR button on the receiver to TAPE and select the appropriate DOLBY NR switch position.
- The tape copy mode is canceled when the end of either of the tapes is reached, so it is advisable to use tapes of the same length.



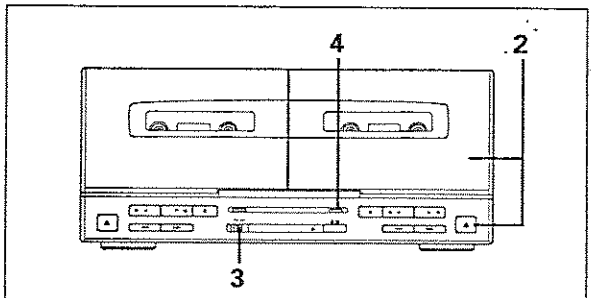
To erase the contents of a tape

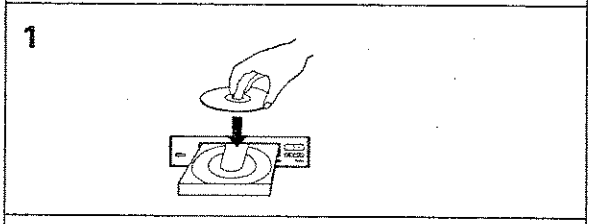
1 Load the tape to be erased into Deck II.

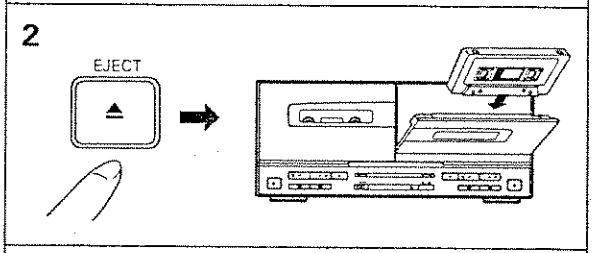
- Check to see that the accidental erasure prevention tab has not been broken off.

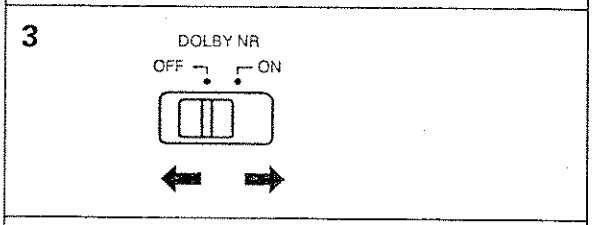
2 Set the INPUT SELECTOR button on the receiver to TAPE.

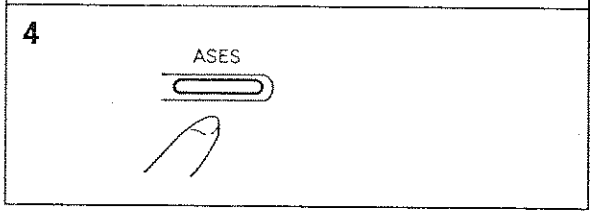
3 Press REC PAUSE (● II) and PLAY (► or ◄).

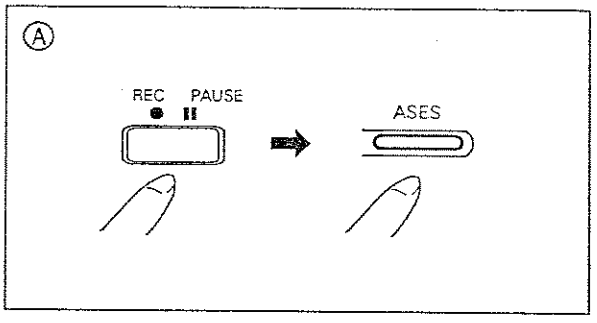








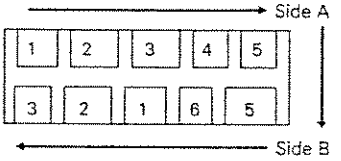




A.S.E.S. (Auto Synchro Editing System)

For automatic recording of a CD to a cassette tape.

- A 10-second blank is recorded at the beginning of the tape automatically.
- Recording starts in the forward (►) direction.
- When recording on both sides, and the tape ends in the middle of a track in the forward (►) direction, recording starts from the beginning of the track when it continues in the reverse (◄) direction.
- If CD play ends before the tape, recording continues from the beginning of the same CD again until the tape is full (FULFILL function).



- The numbers are the CD track numbers.

1 Load the CD.
When programming is performed, tracks will be played in the programmed order.

2 Load the tape for recording into Deck II.
Recording begins in the forward direction (►).

3 Set the DOLBY NR switch to the desired position.

4 Press ASES.

To stop A.S.E.S. during recording:

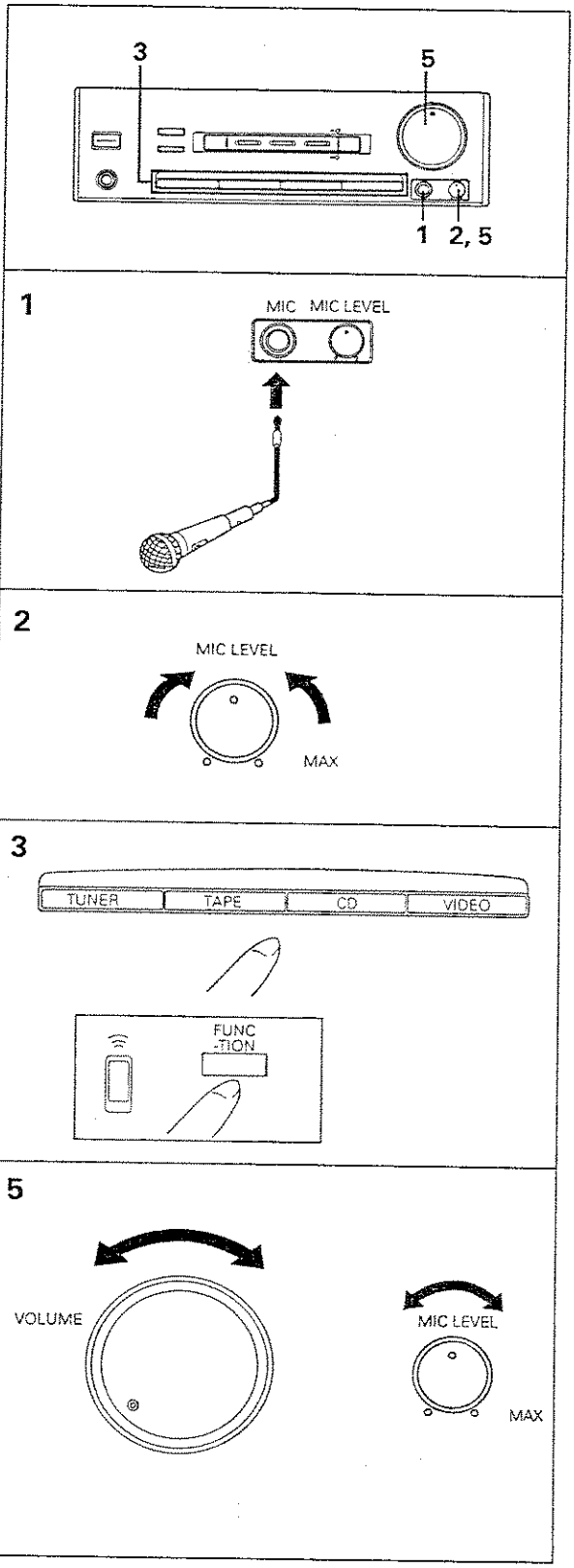
Press Deck II's STOP button or press the CD STOP button.

Ⓐ Link mode (To resume recording with A.S.E.S.)

1. Load the CD.
2. Press REC PAUSE (● II) and then ASES.
   Recording starts from the present point without rewinding to the beginning of the tape.
3. When the CD play ends, the disc tray opens. Change the CD and press ASES.
   Recording resumes with A.S.E.S.

- If recording should be started from the begining of the tape, wind the tape forward past the leader to the start of the magnetic coated portion.

MICROPHONE MIXING (Except for U.S. and Canadian models)



Mixing sounds

1 Plug a microphone into the MIC jack.
2 Set MIC LEVEL to the center position.
3 Select the desired program source with the INPUT SELECTOR buttons and start playback of the program source.
4 Talk or sing into the microphone.
5 Adjust the volume with VOLUME and MIC LEVEL.

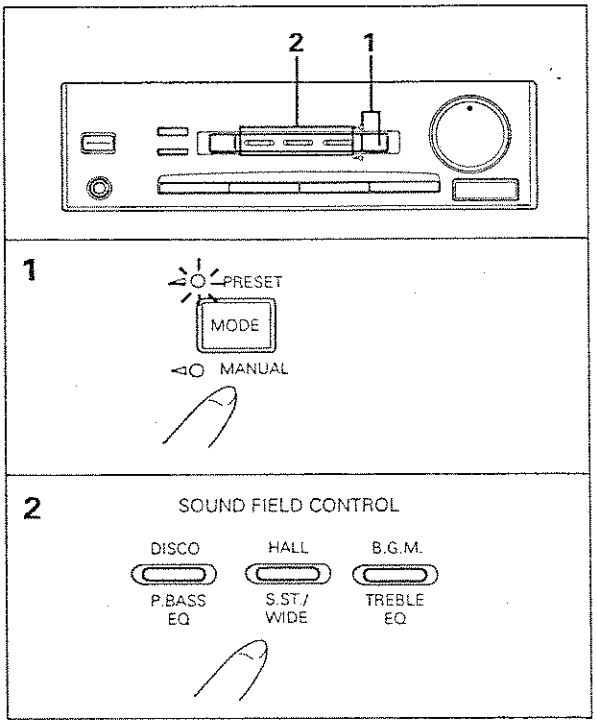
NOTE:
If howling occurs (a high-pitched sound from the speakers), take the following steps.
1. *Turn MIC LEVEL counterclockwise to decrease the microphone volume.*
2. *Move the microphone away from the speakers.*
3. *Turn VOLUME counterclockwise to decrease the volume.*

Mixing recording

You can record the mixed sound onto a tape in Deck II.
1. Perform steps 1 to 5 in the section "Mixing sounds".
2. Load a tape for recording into Deck II.
3. Set DOLBY NR to the desired position.
4. Press REC PAUSE.
5. Press PLAY (► or ◄) on Deck II to start recording.
6. Sing along with the program source.

NOTE:
Mixing recording cannot be carried out with the sound played back in Deck I.

ADJUSTING THE SOUND (SOUND FIELD CONTROL OPERATION)

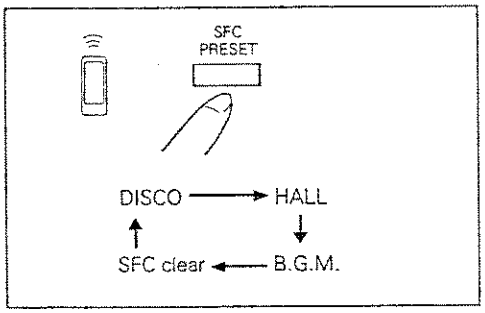


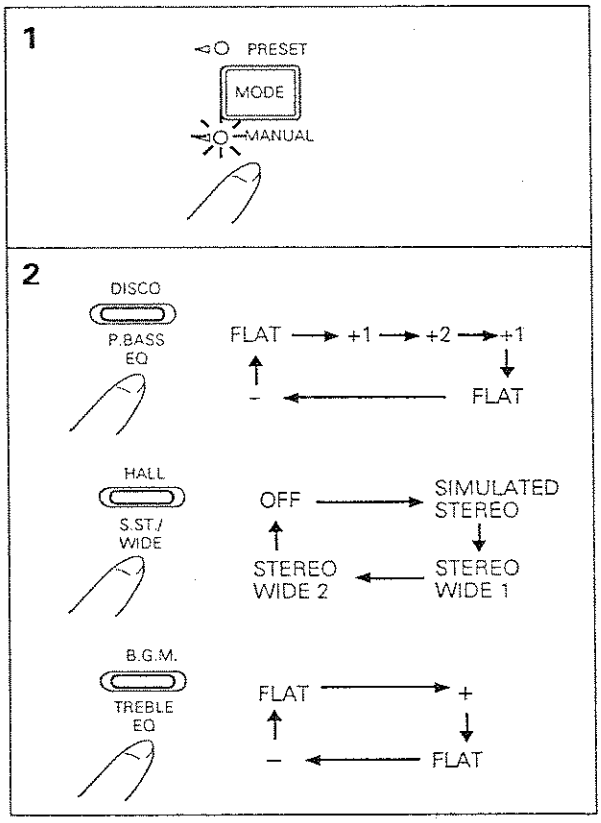
Selecting a preset sound setting

1 Press MODE to select preset mode.
The PRESET indicator lights.

2 Select one of the three settings with the SOUND FIELD CONTROL buttons.

DISCO: This boosts bass and treble to deliver a powerful, more dynamic sound.
HALL: Provides a reverberation effect like that produced in a concert hall.
B.G.M.: Gives you a wide sound with lowered bass and treble response.





Adjusting the sound in manual mode

1 Press MODE to select manual mode.
The MANUAL indicator lights.

2 Adjust the sound using P.BASS EQ, S.ST./ WIDE and TREBLE EQ.

P.BASS EQ :
Adjusts the low-frequency sound level.
Each time P.BASS EQ is pressed, the setting changes in the following sequence: FLAT → +1 → +2 → +1 → FLAT → –.

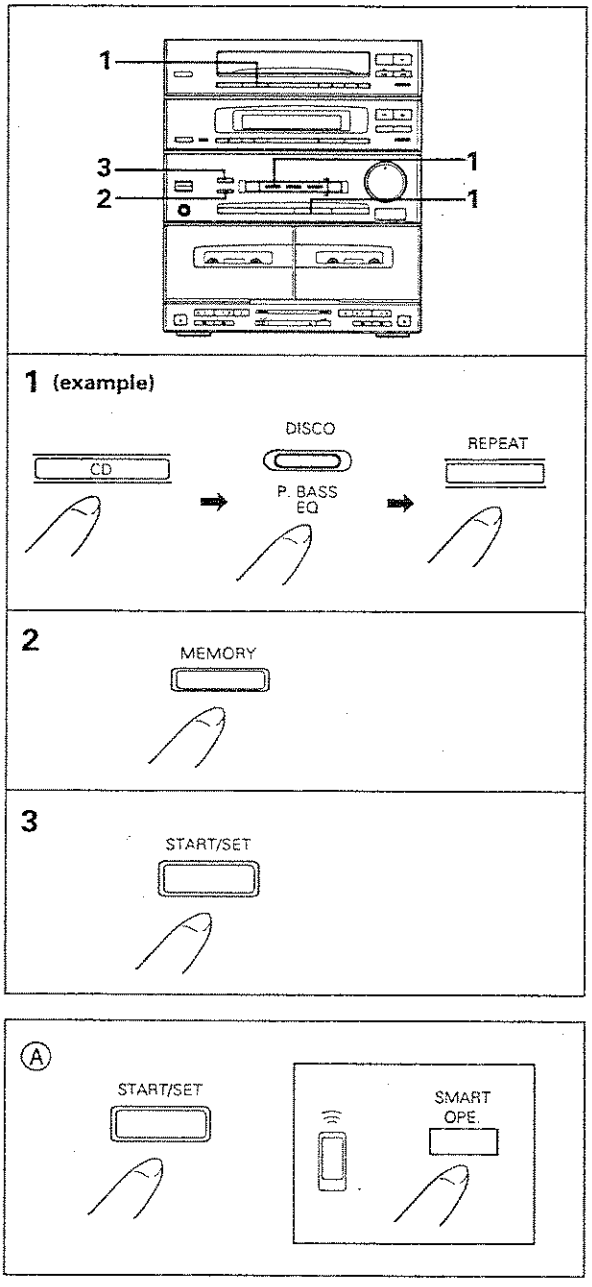
S.ST./WIDE (Simulated Stereo/Stereo wide):
Creates a more expansive sound image.
Each time S.ST./WIDE is pressed, the setting changes in the following sequence: OFF → SIMULATED STEREO → STEREO WIDE 1 → STEREO WIDE 2.

TREBLE EQ:
Adjusts the high-frequency sound level.
Each time TREBLE EQ is pressed, the setting changes in the following sequence: FLAT → + → FLAT → –.

To clear SOUND FIELD CONTROL settings

Press SFC CLEAR.

SMART OPERATION



Memorizing your usual listening settings

This function lets you recall your usual listening settings by simply pressing a single button.
The following settings can be memorized:

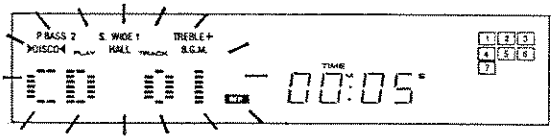
- Function (CD, TUNER, TAPE, VIDEO)
- SOUND FIELD CONTROL settings
- CD repeat playback or random playback setting
- Tuner Station No.

1 Select the appropriate settings to be memorized.

Example: To carry out the DISCO setting when a CD is played in repeat mode.

2 Press SMART OPERATION MEMORY.

The display of the various settings to be memorized will flash.



3 Press SMART OPERATION START/SET within 5 seconds.

Ⓐ To recall the memory

Press SMART OPERATION START/SET.
Memorized settings flash on the display for about 5 seconds.

- Memory recall is also possible when power is off.

NOTES:

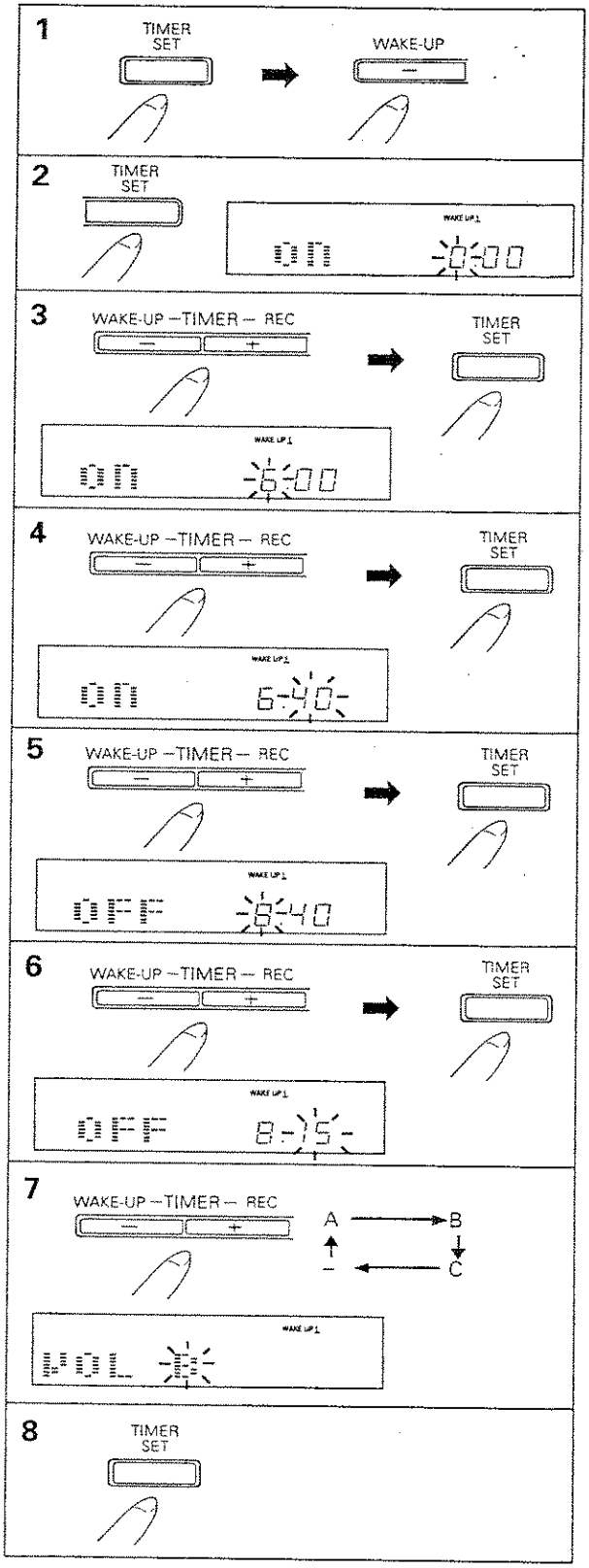
- *If the AC power cord is unplugged or a power failure occurs, the memorized settings will be erased.*
- *The track No. of CD or Deck I/Deck II cannot be memorized.*
- *When CD programming is performed and the power has not been turned off, tracks will be played in the programmed order.*

To search for a playable program source by switching functions automatically

When the settings of the smart operation are not memorized, pressing SMART OPERATION START/SET searches for a playable program source by switching functions automatically. The located program source will be played.

Press SMART OPERATION START/SET.
A CD is played back.
If there is no disc in the tray ...
↓
A tape in Deck I is played back.
If there is no tape in Deck I ...
↓
A tape in Deck II is played back.
If there is no tape in Deck II ...
↓
A broadcast will be heard.
If no broadcast is received ...
↓
Function returns to the CD.

TIMER PLAYBACK



Timer setting

- A compact disc, cassette tape or radio broadcast can be used instead of an alarm clock.
- Timer playback begins every day at the same time as long as the timer playback mode is not canceled.
- You can set two different timers; WAKE UP 1 and WAKE UP 2.

Before setting the timer:

1. Set the clock.
2. Set the SOUND FIELD CONTROLs as desired.
3. Select the desired program source with the INPUT SELECTOR buttons.
4. With a CD, load a CD into the player, and set REPEAT and/or RANDOM if necessary.
   With a cassette tape, load a cassette tape into the deck, specify the tape running direction with PLAY ◄ or ► and stop the tape.
   With a preset station, select the station No.

Example: Using WAKE UP 1 to play a CD from 6:40 to 8:15.

1 Press TIMER SET and then (within 5 seconds) press WAKE-UP (–).
Press WAKE-UP once to select WAKE UP 1.
Press WAKE-UP twice to select WAKE UP 2.

2 Press TIMER SET within 5 seconds.

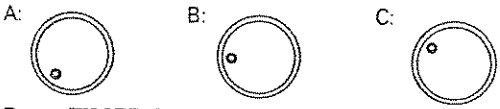
3 Set the wake up (ON) hour using WAKE-UP (–)/REC (+) and press TIMER SET.

4 Set the wake up (ON) minute using WAKE-UP (–)/REC (+) and press TIMER SET.
If you make no further changes within about five seconds, the OFF time is set as one hour after the ON time.

5 Set the turn off hour using WAKE-UP (–)/REC (+) and press TIMER SET.

6 Set the turn off minute using WAKE-UP (–)/REC (+) and press TIMER SET.

7 Set the desired volume level using WAKE-UP (–)/REC (+).
You can select from among four volume level settings. Each time you press REC (+), the volume level setting changes in the following sequence: "A" → "B" → "C" → "–" (Present volume control setting).



8 Press TIMER SET.
This completes timer setting.
Timer on time, timer off time, volume level setting and function setting are displayed in order.

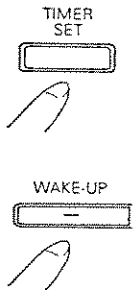
[To activate the timer]

9 Press WAKE-UP (–) and WAKE-UP 1 or WAKE-UP 2 will light in the display.
Press once for WAKE-UP 1
Press twice for WAKE-UP 2

10 Turn the power off with POWER STANDBY/ON.

Tape playback:
Timer playback is possible with a cassette tape loaded in deck I or deck II. When tapes are loaded into both decks, relay playback will be carried out.

To check timer settings



1 **Press TIMER SET.**
2 **Press WAKE-UP within 5 seconds.**
Press once to select WAKE-UP 1.
Press twice to select WAKE-UP 2
3 **After 5 seconds, the display changes to the check mode, and timer settings are displayed in order.**

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and WAKE-UP 1 or 2), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use "–" and "+" to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

NOTE:
If the AC power cord is unplugged or a power failure occurs, set the timer again.

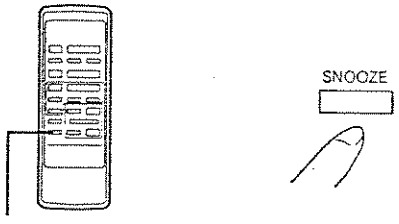
If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

After entering the timer settings, check the display section to confirm which timer is on. The one that is lit (WAKE-UP 1 or 2) is the one that will be executed.
If you press WAKE-UP to turn off the indication, the timer will not operate. However, since the settings remain stored in memory, you can press WAKE-UP again to reactivate the timer.

The SNOOZE function

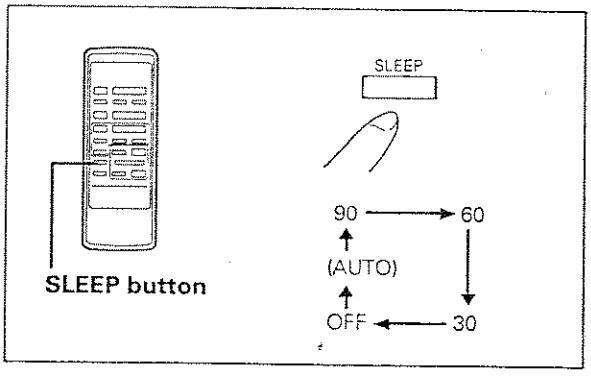


SNOOZE button

After timer playback begins, you can press SNOOZE on the remote control unit to turn the power off temporarily. It comes back on after about 5 minutes.

NOTE:
Power will stay off and play will not resume after 5 minutes if SNOOZE is pressed when there is less than 5 minutes time remaining in the timer setting.

SLEEP TIMER



SLEEP button

Sleep timer - Automatically turns off power

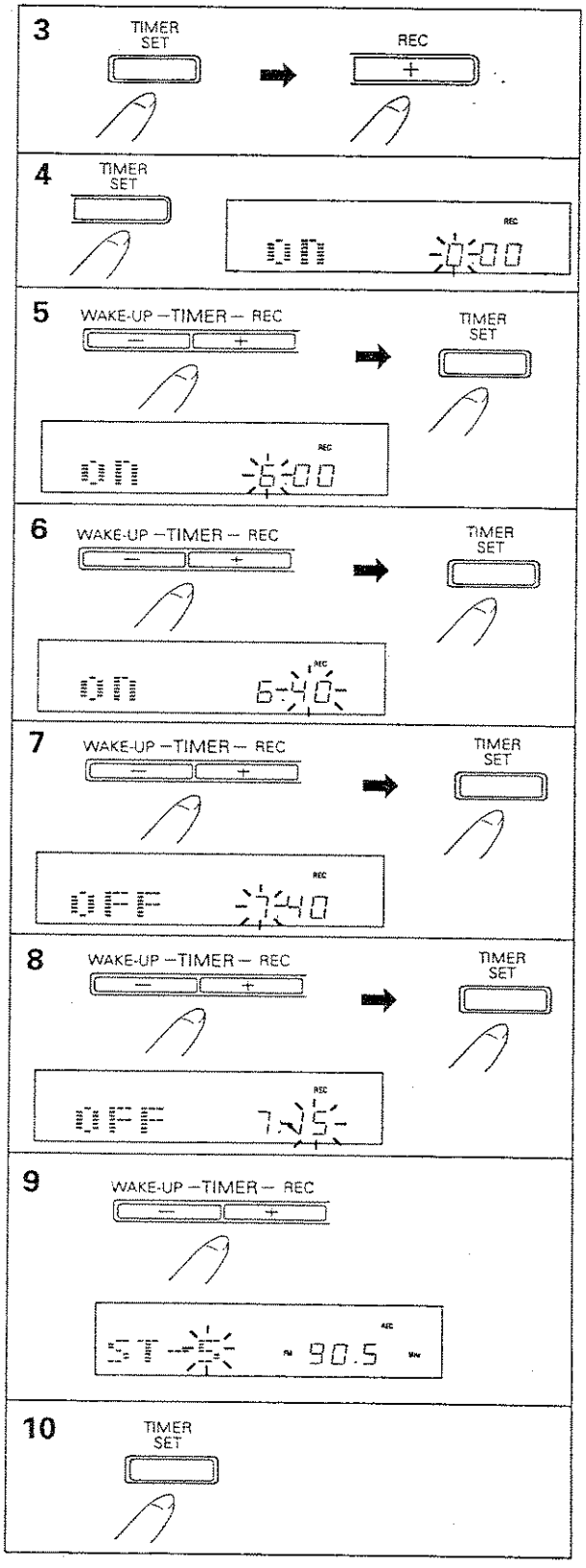
Power turns off automatically after the specified time has elapsed.
Each time SLEEP is pressed, the setting changes in the following sequence: (AUTO) → 90 → 60 → 30 → OFF.
When sleep timer operates, the display section becomes less bright.

Auto sleep

If SLEEP is pressed during recording, auto sleep is switched on. When recording finishes, power is automatically switched off.

NOTE:
If you press SLEEP during Sleep operation, the time remaining till the power turns off is displayed. Do not press SLEEP any more. Otherwise, the setting changes and the sleep timer cannot function properly.

TIMER RECORDING



Timer setting

This allows unattended recording of radio broadcasts.

- Timer recording will be carried out with a preset station. Store the station to be recorded in preset memory beforehand.
- The timer recording mode is deactivated after it has been performed once.

Example: ST-5 is recorded from 6:40 to 7:15.

1 **Load the tape for recording into Deck II.**
Timer recording should begin in the forward direction (►).
- Check to see that the cassette's accidental erasure prevention tabs have not been removed.

2 **Set DOLBY NR on the cassette tape deck to the desired position.**

3 **Press TIMER SET and then (within 5 seconds) press REC (+).**

4 **Press TIMER SET within 5 seconds.**

5 **Set the recording (ON) hour using WAKE-UP (–)/REC (+) and press TIMER SET.**

6 **Set the recording (ON) minute using WAKE-UP (–)/REC (+) and press TIMER SET.**
If you make no further changes within about five seconds, the OFF time is set as one hour after the ON time.

7 **Set the turn off hour using WAKE-UP (–)/REC (+) and press TIMER SET.**

8 **Set the turn off minute using WAKE-UP (–)/REC (+) and press TIMER SET.**

9 **Set the desired station using WAKE-UP (–)/REC (+).**

10 **Press TIMER SET.**
This completes timer setting.
Timer on time, timer off time and station No. are displayed in order.

[To activate timer recording]

11 **Press REC (+) and REC will light in the display.**

12 **Turn the power off with POWER STANDBY/ON.**

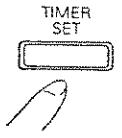
NOTES:

- *When timer recording starts, the volume is set to minimum automatically. If you want to listen to the sound, adjust the volume with the VOLUME control.*
- *If you do not turn off the power after setting the timer, timer recording will not be carried out.*
  If timer settings are overlapped, the later timer setting will not be carried out.

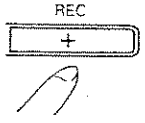
TIMER RECORDING

To check timer settings

1



2



1 Press TIMER SET.
2 Press REC (+) within 5 seconds.
3 After 5 seconds, the display changes to the check mode, and timer settings are displayed in order.

To change timer settings

To change all of the timer settings, start over again, inputting the settings that you want.
To change only one of the timer settings (after pressing TIMER SET and REC), press TIMER SET repeatedly until the display shows the item that you wish to change. Then use "–" and "+" to adjust the setting. Finally, repeatedly press TIMER SET to advance to the end of the procedure.

If you make a mistake while setting the timer

Go ahead to the next item and continue setting the various items until you finish. Then use the "To change timer settings" procedure to change the value of the item that was incorrect.

Turning the timer on and off

Confirm that the REC indicator is lit on the display.
Timer recording ends after being performed once. However, since the settings remain stored in memory, you can reactivate the timer by pressing TIMER REC so that the REC indicator is lit again.

About timer setting priority

ON time: If REC timer and WAKE-UP 1/2 timer are both at the same ON times, REC timer takes priority.
OFF time: When REC timer, WAKE-UP 1/2 timer and SLEEP timer operate, earlier OFF time takes priority.

NOTE:
When WAKE-UP timer and REC timer are set in succession, set these timers at interval of 1 minute or more.

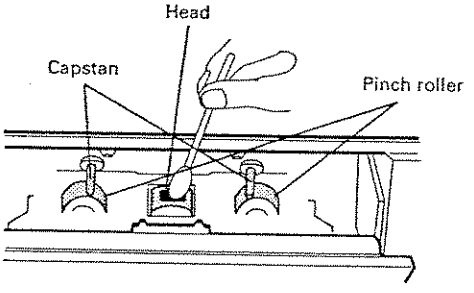
MAINTENANCE

Cleaning the head section

The heads, capstan and pinch roller are parts which are liable to become dirty quite easily, In particular, if the heads are dirty, the high frequency components of the sound will not be reproduced and the stereo balance will be impaired, resulting in a deterioration of sound quality. It is therefore recommended that the head section be cleaned regularly.

1. Turn the power off.
2. Press EJECT to open the cassette door.
3. Dip a cleaning swab into head cleaning fluid and use it to wipe the head, capstan, and pinch rollers. Wait 2-3 minutes until the cleaning fluid dries.

NOTE:
This unit uses a head-slant standby system, with the result that the heads are mounted at an angled position.



Demagnetizing the head

The recording/playback head becomes magnetized when you use the tape deck for prolonged periods of time. This results in noise being generated and the treble dropping off during recording and playback. The recording/playback head should therefore be demagnetized regularly with a commonly sold head demagnetizer.
For further details, refer to the operating instructions accompanying your head demagnetizer.

NOTES:

- *Do not hold screwdrivers, metal objects or magnets close to the heads.*
- *When demagnetizing the heads, be sure the unit's POWER switch is in the STANDBY position.*

Maintenance of external surfaces

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water and wrung out well, then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

General

Symptom	Cause	Remedy
There is no power.	• AC cord is unplugged.	• Plug power cord into wall socket.
No sound from speakers.	• Volume is turned all the way down. • Speaker cords are disconnected. • Speaker cords are connected with vinyl insulation still on. • Function is not set to the desired listening source. • Connection cords are not connected or are incorrectly connected.	• Raise volume setting. • Connect speaker cords correctly. • Strip vinyl insulation from speaker wire tips before connecting. • Select correct function. • Connect correctly.
Sound from only one speaker.	• One of the speaker cords is disconnected or damaged.	• Connect correctly or replace with new cord.
Strange sounds heard (or recorded from) tape, CD or radio.	• TV is on. • The unit is too close to TV.	• Turn off TV. • Move TV away until interference stops.

Tuner

No AM reception.	• Loop antenna not connected. • Wrong radio band. • Station not tuned in.	• Connect Loop antenna correctly. • Set to desired radio band. • Tune in station.
Beat noise heard.	• TV is on. • Loop antenna position bad.	• Turn off TV or move TV away. • Change loop antenna position.
Noise heard.	• Interference from nearby fluorescent light, hair dryer, or other electrical appliance.	• Stop using device causing interference.
Sound is distorted.	• Antenna in poor position. • Broadcast is weak. • Interference from other electrical devices or multipath reception.	• Change antenna position. • Use external antenna. • Change antenna position.
There is no stereo sound.	• Broadcast signal is weak, antenna input is insufficient. • The AM-NR/FM-MONO button is turned on.	• Change to a multi-element external antenna. • Press AM-NR/FM-MONO so that the NR/MONO indicator goes out.

Clock and Timer

No time indication.	• There was a power outage. • AC plug was pulled out.	• Set time again. • Set time again.
Timer does not work.	• Current time is not set. • Start and/or stop time is not set. • Timer is not on.	• Set current time. • Set ON and OFF times. • To use timer, press WAKE-UP (–) or REC (+) so that the timer display lights.

CD player

Symptom	Cause	Remedy
When playback is started, it stops immediately. Pauses or stops during playback.	• Disc is loaded upside down. • Dirt, etc., on the disc.	• Load the disc correctly with the label side UP. • Clean the dirt from the disc and then play it again.
No sound	• Player is in pause mode.	• Press the PLAY or PAUSE button.
With certain discs, loud noise is produced, or play stops.	• Disc has bad scratch or warp. • Disc is extremely dirty.	• Replace the disc. • Clean the disc.

Cassette tape deck

Cassette door does not open. **Cassette door does not close.**	• Deck has not stopped. • Power was switched off while tape was running. • Cassette tape is incorrectly loaded.	• Press the STOP button. • Switch on power again. • Reload the cassette tape correctly.
Tape does not move.	• Deck is in pause mode. • Cassette inserted incorrectly.	• Press the PAUSE or PLAY button. • Put cassette in holder properly.
No sound heard from tape.	• Function not set to TAPE. • Playing unrecorded tape.	• Set to TAPE. • Play a recorded tape.
Cannot record.	• Erasure prevention tabs are broken off. • Dirty head.	• Apply adhesive tape over tab holes. • Clean head.
Previously recorded sounds remain.	• Dirty head.	• Clean head.
Cannot copy tape.	• One deck has no tape loaded. • Tape in Deck II has erasure prevention tabs broken off.	• Load tapes in both decks. • Use cassette that can be recorded on, or apply adhesive tape over tab holes.
Sound is muffled and unclear.	• Dirty head. • DOLBY NR system is ON when listening to a tape recorded without DOLBY NR.	• Clean head. • Use same noise reduction system for playback as for recording. (Do not play tapes recorded with different NR systems.)
Treble tones too strong.	• Tape recorded with DOLBY NR but played without.	• Play in same condition as recording. (Turn on DOLBY NR switch for tapes recorded with DOLBY NR.)

Remote control unit

Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle.

Abnormal functioning of this unit may be caused by lightning, static electicity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

SPECIFICATIONS

Continuous Average Power Output is 20 Watts* per channel, min., at 8 ohms from 50 Hertz to 20,000 Hertz with no more than 0.9 % total harmonic distortion.

Continuous Power Output (RMS) ..... 27 W + 27 W
(1 kHz, T.H.D. 5%, 8 Ω)
Hum & Noise
(DIN, Continuous Power/50 mW) ..... 68 dB/60 dB
Total Harmonic Distortion
(40 Hz to 20,000 Hz, 12.5 W, 8 ohms)** VIDEO
..... No more than 0.2%
(Multi-voltage models only)
Music Power (DIN) ..... 37 W + 37 W
Peak Music Power ..... 200 W

FM/AM tuner section

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono: 12.8 dBf, IHF
(1.2 µV/75 ohms)
Sensitivity (DIN) ..... Mono S/N 26 dB: 1 µV/75 Ω
Stereo S/N 46 dB: 50 µV/75 Ω
Signal-to-Noise Ratio (IHF, 85 dBf Input) ..... Mono: 77 dB
Stereo: 73 dB
Signal-to-Noise Ratio (DIN) ..... Mono: 66 dB
Stereo: 60 dB
Distortion ..... Stereo: 0.5 % (1kHz)
Antenna Input ..... 75 ohms unbalanced

AM Tuner Section

Frequency Range
With 10 kHz step ..... 530 kHz to 1,700 kHz
With 9 kHz step ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Antenna ..... Loop Antenna

CD Section

Type ..... Compact disc digital audio system
Wow and Flutter ..... Limit of measurement
(±0.001% W.PEAK) or less (EIAJ)

Cassette deck section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 2
Wow and Flutter ..... No more than 0.09 % (WRMS)
Frequency Response (-20 dB recording):
CrO_2 tape ..... 35 Hz to 15,000 Hz ±6 dB
Normal tape ..... 35 Hz to 14,000 Hz ±6 dB
Signal-to-Noise Ratio
Dolby NR OFF ..... 56 dB
Noise Reduction Effect
Dolby B type NR ON ..... More than 10 dB (at 5 kHz)

Miscellaneous

Power Requirements
Australian model ..... a.c. 240 Volts, 50/60 Hz
Multi-voltage models ..... AC 110/120 – 127/220/240 V
(switchable), 50/60 Hz
U.S. and Canadian models ..... AC 120 V, 60 Hz
Power Consumption
U.S. and Canadian models ..... 70 W
Other destination models ..... 150 W
Dimensions ..... 260 (W) x 310 (H) x 295 (D) mm
10-4/16 (W) x 12-3/16 (H) x 11-10/16 (D) in
Weight (without package) ..... 8.0 kg (17 lb 10 oz)

Accessories

Operating Instructions 1
Remote Control Unit 1
Dry Cell Batteries (AAA/R03) 2
FM Antenna 1
AM Loop Antenna 1

SPEAKER SYSTEM

S-P310A (For U.S. and Canadian models)

Enclosure ..... Bass reflex type
System ..... 3-way 3-speaker system
Loudspeakers:
Woofer ..... 14 cm cone type
Mid-Range ..... 6.6 cm cone type
Tweeter ..... 2.0 cm dome type
Frequency Range ..... 55 to 20,000 Hz
Input Impedance ..... 8 Ω
Sensitivity ..... 87 dB/W at 1 m distance
Maximum Power ..... 30 W
Dimensions ..... 180 (W) x 310 (H) x 230 (D) mm
7-1/16 (W) x 12-3/16 (H) x 9-1/16 (D) in
Weight ..... 3.3 kg (7 lb 4 oz)

S-P310D (For Multi-voltage models and Australian model)

Enclosure ..... Bass reflex type
System ..... 3-way 3-speaker system
Loudspeakers:
Woofer ..... 14 cm cone type
Mid-range ..... 6.6 cm cone type
Tweeter ..... 2.0 cm dome type
Frequency Range ..... 50 to 20,000 Hz
Input Impedance ..... 8 Ω
Sensitivity ..... 85.5 dB/W at 1 m distance
Maximum Power ..... 40 W
Dimensions ..... 170 (W) x 310 (H) x 230 (D) mm
6-11/16 (W) x 12-3/16 (H) x 9-1/16 (D) in
Weight ..... 3.0 kg (6 lb 10 oz)

NOTE:
Specifications and design subject to possible modification without notice due to improvements.

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.
** Measured by audio spectrum analyzer.

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